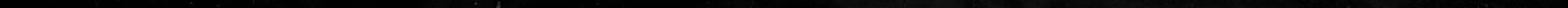

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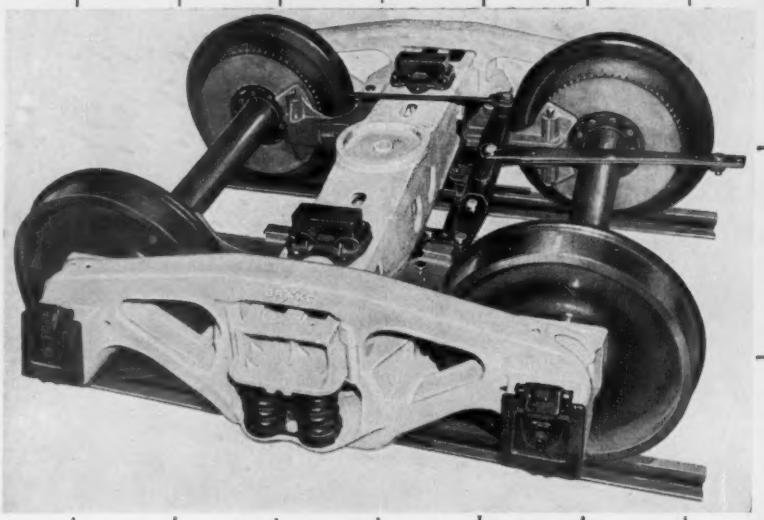

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100 200 300 400 500 600 700 800 900 1000 1100 1200 13

STOP DISTANCE — FEET

the BIG NEWS for '56

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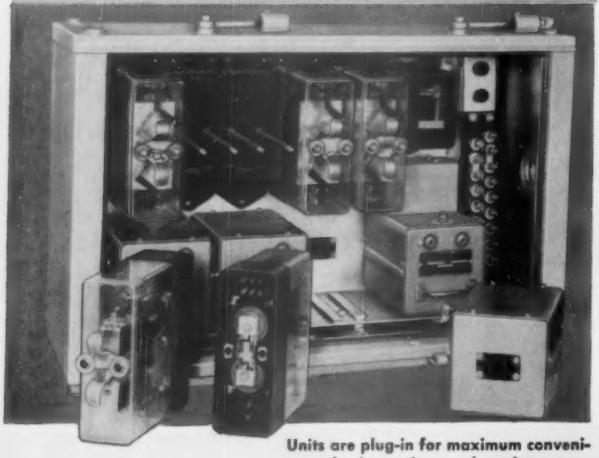

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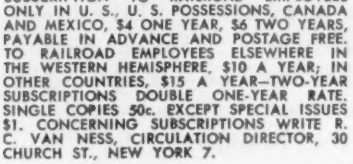

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Workbook of the Railways

Vol. 140, No. 10
March 5, 1956

CONTENTS and Week at a Glance

Railroad passenger service has a future, says Warren Brown of the Monon, hitting out at what he calls the "gloomy pessimism that oozes into every sentence and comment about the passenger business." Primary railroad goal, he emphasizes, should be to arrest the rapidity of deterioration of the passenger business with adequate and profitable service. . . . p. 8

Incentive pay for traffic salesmen gives Chicago & Eastern Illinois traffic representatives a chance to increase their incomes by as much as $60 a month. Even though precise results are hard to measure, the road is confident the idea pays off in terms of increased business. Since incentives were adopted the trend of carloadings has been steadily upward. . . . p. 10

FORUM: Needed—A standard for train radio, and the time to act is close at hand. In May the AAR Communications Section will consider such a proposal. Standardization is a part of technical progress in railroading. The advantages of extending it to radio should be weighed now. . . . p. 35

Gas turbines can burn coal, and the Locomotive Development Committee plans to start building a locomotive with such power in 1957. . . . p. 36

Ways to cut cotton fires—which cost the railroads $2 million in 1954—have been developed in a study made for the SP. . . . p. 40

Section toolhouses on wheels . . . that's "piggyback" in reverse. The TP&W has reduced its track maintenance expense despite rising labor and material costs by a novel rearrangement of forces and special equipment. . . . p. 42

High-price brushes pay off in the Rock Island's car and locomotive washing operation at its Chicago shops. . . . p. 45

Why SNCF is holding its own, in competition with other forms of transportation, is explained by the French state railway system's president, M. Louis Armand. . . p. 46

Current Statistics

Operating revenues, twelve months	
1955	$10,106,398,133
1954	9,370,825,498
Operating expenses, twelve months	
1955	$ 7,646,291,405
1954	7,384,499,680
Taxes, twelve months	
1955	$ 1,080,504,965
1954	861,281,657
Net railway operating income, twelve months	
1955	$ 1,128,115,275
1954	874,017,894
Net income, estimated, twelve months	
1955	$ 917,000,000
1954	677,000,000
Average price 20 railroad stocks	
February 28, 1956	98.06
March 1, 1955	91.22
Carloadings revenue freight	
Seven weeks, 1956	4,776,409
Seven weeks, 1955	4,429,467
Average daily freight car surplus	
Wk. ended Feb. 25, 1956	4,459
Wk. ended Feb. 26, 1955	43,244
Average daily freight car shortage	
Wk. ended Feb. 25, 1956	3,607
Wk. ended Feb. 26, 1955	914
Freight cars on order	
February 1, 1956	144,946
February 1, 1955	18,395
Freight cars delivered	
One month, 1956	4,199
One month, 1955	2,008
Average number of railroad employees	
Mid-January 1956	1,047,561
Mid-January 1955	1,009,402

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Week at a Glance CONTINUED

A rubber-tired switcher called "Switchmobile," built by LeTourneau-Westinghouse Company, is taking over some of the Pennsylvania's switching work in Jersey City, N.J. Chief asset of the four-wheel unit is its ability to cut across city streets between industrial plants and thereby cut the time ordinarily lost between switching assignments. . . . p. 54

BRIEFS

Forwarder use of "piggyback" services would be facilitated by a proposed amendment to section 409 of the Interstate Commerce Act. The proposal, embodied in House Bill 9548, would authorize rail-forwarder contracts for the movement of trailers on flat cars. Its sponsor is Representative Harris of Arkansas, a member of the House Committee on Interstate and Foreign Commerce.

A National Defense Executive Reserve has been established by President Eisenhower. It will be composed of persons selected from various segments of the civilian economy, including transportation, to be trained for executive positions in the federal government during periods of emergency. The director of defense mobilization is administrator of the program, and he is to provide "for appropriate standards of recruitment and training" for the reserves.

No assistant director of locomotive inspection is on duty at the ICC. James E. Friend, who has been in that position, left Washington recently to return to the field staff as district inspector at Fort Worth, Tex. The other assistant directorship has been vacant since March 31, 1954, when Allyn C. Breed retired. Like the directorship, held by John A. Hall, the assistant directorships are filled by Presidential appointments; and appointments of recent years have stirred up controversy among railroad labor organizations seeking to have the appointees chosen from among their members.

Continuous promises not carried out is the way Commissioner Mitchell of the ICC sums up his idea of what railroads have done about car supply since the war. "The car shortage is with us and getting worse right along," he says. Meanwhile, Commissioner Hutchinson thinks recent cars-on-order figures indicate "the picture has improved considerably."

WOW!

2.8¢ net profit per ton mile

TO THE RAILROADS

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It pays to be all ears when a Seatrain man talks about the advantages of shipments routed Rail-Seatrain-Rail. You'll hear how, on the average, the rail lines more than double their profits. *Net profits* which average *2.8¢ per ton mile* are being realized by the railroads on Rail-Seatrain traffic between East and Southwest.*

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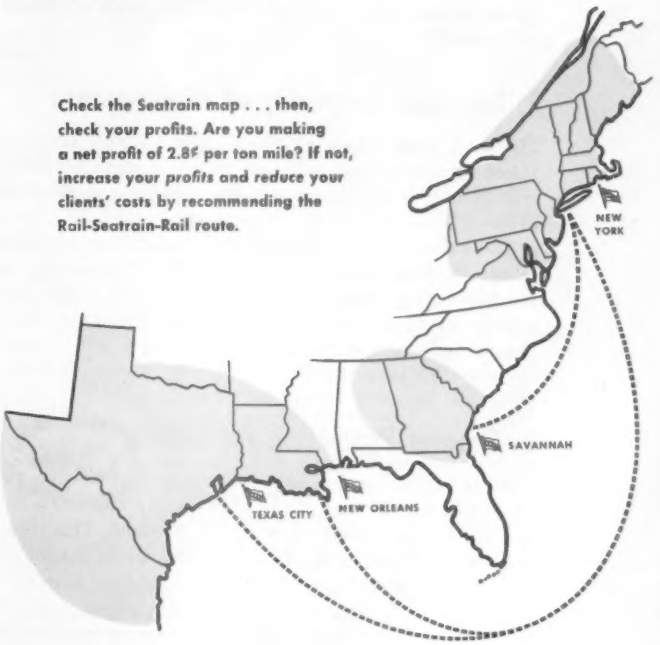

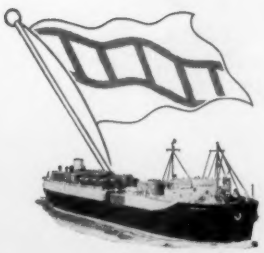

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Here's why FREIGHT CARS NEED SOLID JOURNAL BEARINGS

It's not just a question of low initial cost: you also choose solid-type bearings because they offer the utmost in load capacity, protection for lading, ease and simplicity of maintenance and many other advantages. They all add up to a BIGGER NET RETURN per car dollar invested.

SURE, you get up to 10% more cars for your money, up to 10% more car availability, and hence more freight revenue per car dollar invested with low-cost solid bearings. But there are many other inherent advantages, too. Let's take a quick look.

1. Unrestricted as to Speed and Load

Steel, stone, ore—you can take the biggest loads with solid bearing cars—right up to axle capacity. Solid bearings reduce these maximum loads to about 700 psi—well within bearing and oil film capacity. (Compressive strength of the babbitt at highest normal temperatures is over 7200 psi.)

What about speed? Oil film pressures increase with speed. You get a thicker film of oil that more than compensates for any viscosity change. *With solid bearing cars you're actually better off in the higher range of freight train speeds.*

2. Ease and Simplicity of Maintenance

The AAR journal bearing assembly is a simple standard. Internal parts can be easily inspected or removed—without special tools or equipment, with the minimum of effort and time.

There's no need for expensive shop facilities or skilled labor. Stocking of parts is simple and replacements are available at any repair point of any line. And unlike other bearing types, in the event of road failure you can almost always make necessary repairs and bring a solid bearing car in on the same wheels.

3. Greater Protection for Lading

With solid bearings lading gets the smoothest possible ride on standard freight car trucks. That's because lateral shocks are flexibly controlled—not rigidly opposed. This means less wear and tear on car bodies, trucks, wheel flanges and rails, too!

4. Weight and Resistance Advantages

In motion the solid bearing glides on a film of oil like a skater on ice. Dynamic resistance is as low or lower than that of any other type of bearing—averages less than one pound per ton regardless of the outside temperature or speed of operation.

Solid bearings also save many tons unsprung dead weight on every moving train. Lighter weight, plus lowest possible resistance in pounds per ton, puts the maximum tractive effort of the locomotive to the business of moving goods.

5. Improved Dependability in Freight Service

Solid bearing performance is getting better all the time. In 1954, there was only one set-off for every 15 cars—equivalent to each car operating 15 years per road failure of a bearing. And this average car was almost 20 years old. You can bet that other bearing types would have a tough time trying to beat that record.

Better still, means are now available to reduce journal box servicing requirements and get still better solid bearing performance. Improved bearings and lubricators are now being installed. Periodic servicing—on a calendar basis—and 3-year repacks will not be far behind.

You save money in many ways with solid bearing cars, and you will save even more in the future. With so many inherent advantages, you just can't beat solid-type bearings for railroad rolling stock!

Magnus Metal Corporation, 111 Broadway, New York 6; or 80 E. Jackson Blvd., Chicago 4.

MAGNUS

Solid Bearings

MAGNUS METAL CORPORATION

Subsidiary of **NATIONAL LEAD COMPANY**

RAILWAY MARKET OUTLOOK THIS WEEK

a RAILWAY AGE Workbook Page

Carloadings Down.—Loadings of revenue freight in the week ended February 25 totaled 687,018 cars, the Association of American Railroads announced March 1. This was a decrease of 11,301 cars, or 1.6%, compared with the previous week; an increase of 55,946 cars, or 8.9%, compared with the corresponding week last year; and an increase of 91,987 cars, or 15.5%, compared with the equivalent 1954 week.

Loadings of revenue freight for the week ended February 18 totaled 698,319 cars; the summary, compiled by the Car Service Division, AAR, follows:

REVENUE FREIGHT CAR LOADINGS

For the week ended Saturday, February 18

District	1955	1954	1953
Eastern	119,268	113,367	109,593
Allegheny	141,606	121,716	119,880
Pocahontas	61,283	50,767	43,834
Southern	131,802	124,106	120,359
Northwestern	73,842	72,464	71,190
Central Western	115,744	111,573	99,869
Southwestern	54,774	56,255	53,898
Total Western Districts	244,360	240,292	224,957
Total All Roads	698,319	650,248	618,623
Commodities:			
Grain and grain products	46,914	46,104	43,877
Livestock	6,228	6,181	5,563
Coal	140,146	126,055	104,029
Coke	13,721	10,507	9,144
Forest Products	45,237	42,915	39,137
Ore	21,445	13,772	15,493
Merchandise l.c.l.	61,891	61,963	64,781
Miscellaneous	362,737	342,751	336,599
February 18	698,319	650,248	618,623
February 11	684,328	638,788	623,706
February 4	680,989	635,779	624,385
January 28	691,850	637,116	628,193
January 21	699,286	630,351	617,213
Cumulative total, 7 weeks	4,776,409	4,429,467	4,356,220

In Canada.—Carloadings for the seven-day period ended February 14 totaled 76,622 cars, compared with 77,763 cars for the previous seven-day period, according to the Dominion Bureau of Statistics.

	Revenue Cars Loaded	Total Cars Rec'd from Connections
Totals for Canada:		
February 14, 1956	76,622	36,185
February 14, 1955	67,105	30,744
Cumulative Totals:		
February 14, 1956	473,541	218,613
February 14, 1955	419,754	191,885

New Equipment

LOCOMOTIVES

► *January Installations Up.*—AAR reports new units put into service by Class I roads in January totaled 126 (all diesel-electrics), compared with 121 units (all diesel-electrics), installed in January 1955; December 1955 installations totaled 157 (all diesel-electrics); 835 new units were on order February 1—including 808 diesel-electrics, 15 gas turbine-electrics and 12 electrics—compared with February 1, 1955, total of 472 (462 diesel-electrics, 10 electrics).

PASSENGER CARS

► *Hudson & Manhattan.*—Reorganization trustee will ask Federal Court permission to obtain bids for 50 to 56 new cars expected to cost about $5,000,000; cost is expected to be shared by the Pennsylvania, trustee's announcement said; cars will be first new units ordered by H&M in 28 years.

SPECIAL

► *Quebec North Shore & Labrador.*—Ordered two cabooses, International Railway Car; approximate cost $16,000 each; delivery expected next June.

Maintenance Expenditures

► *Rose 3% in 1955.*—Class I roads spent $93 million or 3%, more on maintenance in 1955 than in 1954, according to ICC's Bureau of Transport Economics & Statistics; breakdown of maintenance of way, structure and equipment costs for 1955 and 1954 follows:

	1955	1954	% Change
Maintenance of Way & Structures	$1,387,512,185	$1,351,854,559	2.6 (i)
Maintenance of Equipment	1,787,739,994	1,730,316,425	3.3 (i)
Totals	3,175,252,179	3,082,170,984	3.0 (i)

(i) increase

New Facilities

► *Alton & Southern.*—New construction projects (estimated costs in parentheses) include: extension of third track into Davis Yard, East St. Louis, Ill. ($80,900); additional "drill track" in Davis Yard ($22,480); add block signals through "bottoms" north of East St. Louis ($32,200); improvements in A&S-Nickel Plate interchange ($17,600).

► *Electro-Motive Division* of General Motors plans multi-million dollar expansion of its locomotive building facilities at McCook, Ill.; details are to be announced shortly.

► *Illinois Central.*—Extension of Randolph Street suburban station, Chicago, costing approximately $150,000, is scheduled for completion about mid-1956; project involves expansion of waiting room; new concourse; new quarters for suburban service officers.

► *New York Central.*—Plans new $150,000 passenger station at Harmon, N.Y., to improve commutation service and permit through passengers to board and leave trains there rather than at Grand Central Terminal.

Passenger Service Has a Future

Warren Brown tells C&O passenger staff meeting the service has a future IF railroads want it to have one; Walter Tuohy sees C&O passenger service moving toward self-sufficiency

It's high time the railroad industry made up its mind about passenger service. The implication—that rail carriers had better take positive steps or face bigger losses—was emphasized recently by Warren W. Brown, president of the Monon.

"There's a future for railroad passenger service if we decide to make one," Mr. Brown told a Chesapeake & Ohio passenger staff meeting in White Sulphur Springs, W. Va. The scope, magnitude, and seriousness of the passenger problem should not scare railroads away from the problem, he said.

The Monon president spoke to the C&O passenger group over a special telephone hook-up from New York, while his audience listened in a special conference room at the Greenbriar.

Mr. Brown said too much current passenger traffic policy concentrates on eliminating trains, dining service and other accessorial services; investing a minimum amount of capital in new equipment, and continuation of an inflexible pricing structure.

If railroads keep this up, Mr. Brown said, the industry can look forward to a continued decline in patronage, accelerated abandonment of trains and train mileage, constantly deteriorating standards of service and courtesy, and the mushrooming of distasteful public relations.

"There's nothing wrong except our thinking; specifically, this gloomy pessimism that oozes into every sentence and comment about the passenger business," he added.

Steps To Take—Mr. Brown recommended three steps to change the passenger-traffic situation: (1) More realistic knowledge about costs; (2) more knowledge about competition. (3) More knowledge about "tools" of the passenger departments.

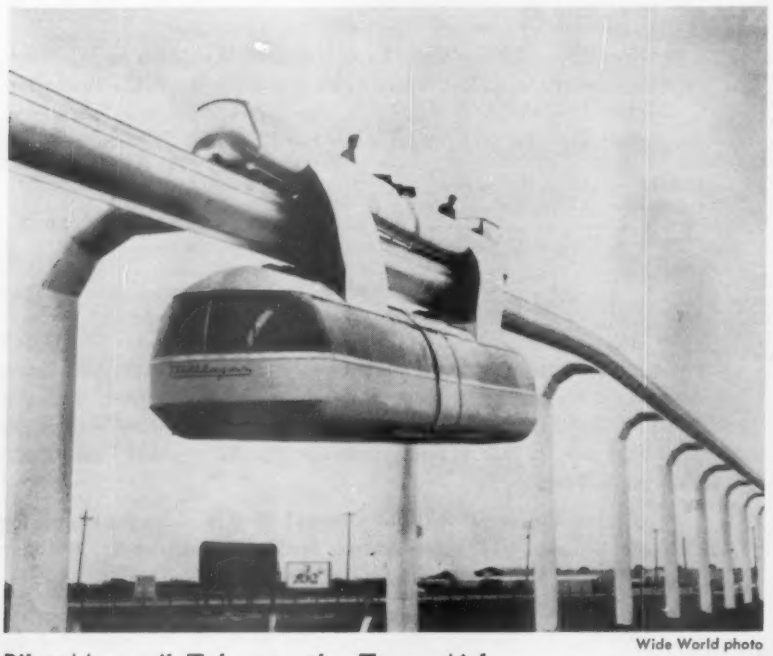
"Any group of solutions for our present passenger problem will never project railroads back into any lost position of competitive appeal and power," he continued. "Our goal should be to arrest the rapidity of deterioration with adequate and profitable service."

C&O Revenues Improve—Meanwhile, C&O President Walter J. Tuohy told the staff meeting that the road's passenger service has done well, and that ticket revenue in 1955 increased $400,000 over 1954.

Mr. Tuohy credited this accomplishment to the energy and incentive of the C&O's passenger department. "In the past nine years this aggressiveness has resulted in passenger service moving steadily along the path of self sufficiency," he said. He added that direct loss from passenger service on the C&O, which amounted to $9 million in 1947, had been cut in half by last year.

"This is a good improvement, yet we on the C&O have our work cut out for us if we are to maintain the healthy trend," Mr. Tuohy continued.

"The industry has introduced low-cost lightweight trains," he added, "yet it took ten years to 'sell' the industry the notion that we had to try revolutionary ideas. Railroads haven't yet developed the punch necessary to tell the world about their services in the way automobile producers have."



Wide World photo

Pilot Monorail Takes to the Texas Air!

This 55-passenger coach, suspended from a single rail, recently received its first operating tests at Houston, Tex. The full scale pilot line, built by Monorail, Inc., is 970-ft long and cost about $100,000. The car, powered by two 305-hp gasoline engines, has eight wheels with pneumatic tires and 16 guide wheels which hold it on the running rail of 30-in. steel pipe. The test unit attained a top speed of only 20 mph, although the builders hope it will be capable of 60 mph before tests are completed. A commercial monorail system would cost about $500,000 a mile to construct.

Nowell Heads ICC Bureau

Lee R. Nowell has been appointed director of the Interstate Commerce Commission's Bureau of Water Carriers and Freight Forwarders, of which he has been acting director since November 25, 1953. Mr. Nowell, who joined the commission in August 1936, has been with the bureau since 1942, where he served in various capacities, including administrative assistant, examiner, attorney, and attorney-advisor.

Technical Tidings

Selected from March Railway monthlies

How machines are being used to take up unneeded trackage is described and illustrated in the March Equipment Economics Number of Railway Track & Structures. Photographs depict a variety of equipment taking up and loading fastenings, rails, crossties and ballast.

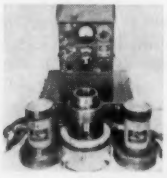
Maintenance of railroad radio is comprehensively reviewed by representatives of three major railroads in a roundtable discussion reported in Railway Signaling & Communications.

Train Power for lightweight trains—the relative merits of various power sources are compared in Railway Locomotives & Cars. Electric heating is indicated if cars are to be really light weight.

Yardmasters are free to roam with a new system of yard communications described in the current Railway Signaling & Communications. At Spokane, Wash., on the Union Pacific, the yardmaster has no console in his office, but can receive or make calls at any talk-back speaker throughout the yard.

The annual revision of freight car Interchange Rules has been made. Changes are listed and explained in the March Railway Locomotives & Cars.

"Fantastic terms" in the thinking of railway maintenance of way men are prescribed by J. P. Hiltz, Jr., in Railway Track & Structures. Such thinking is necessary, says the new vice-president of the D&H, to develop the improved work methods and machines needed for maximum economy.



Dome cars, high-level cars, and gallery cars counter the trend to low-slung equipment. Center of gravity must be determined in these high cars to avoid excessive roll on curves and so springs and journals will not be overloaded. The current Railway Locomotives & Cars tells how this is done.

Box cars that load more rapidly and that protect the lading once it is in the car are demanded by many shippers. One such design, the Unit-Load car, is completely described in the current Railway Locomotives & Cars.

Reading Brakeman Gets Hero's Award

Medal of honor is presented to Aloysius A. Russell, Reading brakeman, by ICC Chairman Anthony F. Arpaia at Washington. Mr. Russell, 27, snatched a 2½-year-old boy from the path of a locomotive on which the brakeman was riding last June 12, at Suplee, Pa., narrowly escaping death himself as he tumbled from a precarious perch on footboard at engine's front end.

More Business for B&O in 1956

The Baltimore & Ohio anticipates that its 1956 freight volume will surpass last year's by about 5%, with the increase making itself evident during the first half of the year.

G. Murray Campbell, B&O vice-president and executive representative at Chicago, spelled out the prospect in an address to a railway supply group at Chicago's Union League Club. Mr. Campbell predicted growing markets for both coal and iron ore over the next ten years. He said coal accounted for 43% of B&O tonnage in 1955, and contributed 27% of the road's freight revenue.

The application pending before the ICC for a 7% increase in freight rates will, if granted, just about cover increases in wages, material costs and taxes of recent months, he said.

Mr. Campbell said railroads never can have spectacularly high earnings because their business is wide open to the view of the public, and the public likes to argue with them about what they earn and charge. He suggested that friends of the railroads, including the supply trade, can do much to help carriers gain better understanding from the public.

"When a railroad has money to spend, it spends it," he said. "No railroad ever has enough money to do all the things it would like to do. There are many feasible and economical things to do within the reach of reasonable expenditure, but if net earnings are held down they can't be accomplished," he declared.

Anti-RR Witness Says Truckers Renege

Truck interests promised a secretary $25,000 for testimony in their $250 million damage suit against the railroads and then welshed on the deal, the secretary has charged.

Sonya Saroyan, former employee of Carl Byoir & Associates, public relations firm also named in the truckers' suit, said in a letter to Federal Judge T. J. Clary, who is scheduled to preside at the trial, that she had spent "4½ agonizingly long years" with the truckers and now "they are reneging."

Miss Saroyan testified against the railroads in pre-trial proceedings in 1953. Now, she told the judge, the truckers say they will not bring their suit to trial and have no further responsibility to her. Counsel for the truckers—the Pennsylvania Motor Truck Association is plaintiff in the suit—denied Miss Saroyan's charges, but she has been invited to appear before a Federal Grand Jury to air the accusations.

Meanwhile, 16 railroads have petitioned Judge Clary for permission to file a counter suit charging the truckers with conspiracy and restraint of trade. The railroads are asking $120,000,000 in damages, under terms of the Sherman anti-trust act. A hearing on the railroads' petition is scheduled for March 20.

Incentive Pay Aids Sales Hustle

Extra pay for extra effort gives C&EI salesmen a chance to boost their income and railroad business at the same time

Chicago & Eastern Illinois traffic representatives, propelled by a new incentive plan under which a salesman can increase his pay as much as $60 a month, are putting some added push into their bid for business this year.

The road labels its incentive program a modified "put-and-take" plan. Here's how it works:

Each salesman has been given a "credit" of $360 for 1956. This sum is divided three ways—$120 for inbound, $120 for outbound, and $120 for controlled traffic.

Against each $120 account the railroad applies a yardstick of 5%. For example if a salesman in March increases his inbound traffic 5% or more over the same month last year, $10 will be added to his inbound account. If his outbound tonnage fails to show a 5% gain, that account loses $10. This same put-and-take rule applies to controlled tonnage. A running month-by-month scorecard is kept on each man.

$720 a Year—If a salesman tallies monthly 5% gains in all three categories throughout the year, the C&EI in the 12 months will have added $360 to his starting "credit." Converted into cash, this gives him additional pay of $720 for the year. Meanwhile, if he fails to record any 5% gains during the year, his initial $360 credit shrinks to zero. Settling up time is at end of the year.

There is one major exception to the 5% rule. In a smaller agency where volume runs under 50 cars a month in any category, a 25% increase is required to have $10 added to the inbound, outbound or controlled account.

This is the fourth year the C&EI has used some form of sales incentive program in the traffic department. The road is confident the idea pays off, although precise results are hard to measure. Perhaps the best gage is to look at the trend of total carloads handled on the road—originated as well as received from connections—since incentives have been in effect.

In 1952, total carloads handled were 304,727; in 1953, 319,060; in 1954, 324,871, and in 1955, 372,223. Growth has been consistent.

How 1953 Traffic Paid RR Overhead

The Manufactures and Miscellaneous group of commodities seems to have carried 70% of the railroads' "overhead burden" in 1953 when it accounted for only 36.6% of all carload revenue ton-miles.

This was indicated by a study (Statement No. 4-56), issued by the ICC's Bureau of Accounts, Cost Finding and Valuation. The statement was issued "as information," not having been "adopted by the commission."

Like similar previous studies, it was based on data obtained from the commission's one-per-cent waybill sample. The stated "intent" is to "present certain factual data and to provide certain measures of the compensatory aspects of the rate structure as it existed in 1953."

Topper—The Manufactures and Miscellaneous group led all others as a contributor to 1953 overhead payments. Second was the Products of Mines group, which contributed 13.1% of the "overhead," but accounted for 36.8% of the revenue ton-miles.

As to other groups, Products of Agriculture contributed 8.9% to overhead and accounted for 13.6% of the ton-miles; Products of Forests, 4.7% and 9.7%, respectively; Animals and Products, 1.5% and 2.4%, respectively. Forwarder traffic contributed 1.8% and accounted for 0.9% of ton-miles.

Revenue—That portion of 1953 traffic reflected in the waybill sample yielded revenues of $82,749,000. This exceeded out-of-pocket costs by $27,077,000, the latter being the "revenue contribution" to railroads' overhead.

Data in the report also showed that each commodity group earned revenues exceeding its out-of-pocket costs. Ratios of revenue to out-of-pocket costs were: Manufactures and Miscellaneous, 183; Products of Agriculture and of Forests, both 128; Products of Mines, 121; Animals and Products, 115.

High Visibility for Freight Cars as Safety Measure

These new Chicago & North Western cars really stand out at night. All box cars now being delivered to the C&NW feature Scotch-lite letters four feet high. The lettering has high reflective qualities, making it particularly valuable at highway grade crossings, and its use on the C&NW is part of that road's continuing accident-reduction program.

Passengers Come First On New Haven, Alpert Says

Improved service for the traveling public is his first objective, George Alpert, president of the New Haven, told the Massachusetts Department of Public Utilities at a recent public hearing in Boston.

He outlined the road's program to accomplish the objective, which includes, among other things changes in the mechanical department involving the hiring of 175 additional men, setting up car washing facilities at Springfield, Mass., and a study being made on the feasibility of pre-cooling

Every Fifteenth Truck Weighs 50,000 lb. or More

Each thousand trucks operating on main rural highways in 1954 included 67 vehicles weighing 50,000 lb. or more—nearly twice the comparable 1949 figure of 36.

This was shown by the latest survey of the Bureau of Public Roads results of which were summarized in "Transport Economics," issued by the Bureau of Transport Economics and Statistics of the ICC. The survey involved a count of 395,050 vehicles, of which 134,448 were weighed.

The 67 vehicles in the 50,000-lb.-and-over group compared with 66 in 1953 and 58 in 1950. Taking all vehicles weighing 30,000 lb. or more, however, there was a drop from 1953's 200 per 1,000 to 1954's 193.

Two Named to ICC; Would Succeed Johnson, Elliott

President Eisenhower last week sent to the Senate nominations of Donald P. McPherson and Lawrence Walrath for membership on the Interstate Commerce Commission.

Mr. McPherson, a Republican of Gettysburg, Pa., and a member of the Pennsylvania state senate, would succeed J. Monroe Johnson, a Democrat, whose term expired December 31 but who has since remained on duty at the request of the President. Mr. Walrath, a Democrat of Jacksonville, Fla., would succeed Martin K. Elliott, a Republican, who resigned, effective March 1.

The Terms—Thus the Republican would get the long term expiring December 31, 1962, while the Democrat would serve for the remaining months of Commissioner Elliott's term which expires at the end of this year. Commissioner Elliott's plans to resign had been rumored for some time. He will return to the practice of law.

The Senate Committee on Interstate and Foreign Commerce will hold hearings on the nominations March 14. Both appointees are attorneys. Mr. McPherson, who is in his fiftieth year, was graduated from Princeton with an A.B. degree in 1928, and was awarded his LL.B. at Harvard Law School in 1931. Mr. Walrath, who is in his forty-seventh year, was educated at the University of Florida, receiving an A.B. degree in 1931 and the degree of Doctor of Jurisprudence in 1934.

Carload Rate Index Dropped in 1954

The 1954 index of average rates on carload traffic was below that of a preceding year for the first time since the end of World War II. It was 109, compared with 1953's 111.

The index is computed by the Bureau of Transport Economics and Statistics of the ICC on the basis of 1950 rates as 100. The 1954 figure was released in Statement RI-1, which also included indexes by commodities.

The reduction under 1953 was accounted for mainly by decreases in the Manufactures and Miscellaneous group. The sharpest reduction—from 113 to 102—was in Class 583, Manufactured Iron and Steel. The level for that class is now less than it was in 1949, when its index was 103.

There were also substantial reductions in associated metals classes, and on crude petroleum and industrial sand. While there were also scattered increases in the commodity indexes, the general tendency was toward reduction.

By territories, the 1954 indexes of 109 for Official and Southern territories were two and three points, respectively, below the 1953 figures. The Mountain-Pacific index, at 110, was up a point; Western Trunk Line and Southwestern territories, at 111, were unchanged.

PRR, B&M Trains in Accidents

A broken journal was said to have caused derailment of the Pennsylvania's "Embassy" near Baltimore February 23. Cause of a Boston & Maine commuter train collision near Boston February 28 was not immediately established.

Six persons, including two crewmen, died, and 59 were hospitalized, when nine of the "Embassy's" cars derailed and three overturned at Odenton, Md.

There were 13 fatalities, including the engineer and fireman of a four-car B&M train, when it rammed a stopped train in a heavy snowstorm. About 30 were hospitalized in this accident at Swampscott, Mass.

The PRR and Interstate Commerce Commission reported a broken journal in the sixth car's second axle caused the Odenton mishap. The road said the axle had received a normal checkup before leaving Washington February 23 and a more extensive inspection February 19.

The B&M said signals at Swampscott were checked after the accident and were found in order. A spokesman said the four-car train apparently ran through a red and a yellow signal as well as a flagman's signal at high speed, possibly indicating a "case of human failure."

The ICC announced it will hold a public hearing at Boston March 6 on this accident and one which occurred nearby without fatalities an hour later.

Resolutions to authorize the House Interstate & Foreign Commerce Committee to conduct a full and complete investigation of factors contributing to railroad accidents, with particular attention to recent New England accidents, and the best method for preventing occurrence of similar accidents, have been introduced in the House by Representatives Lane and Bates, both of Massachusetts.

Mr. Lane said it is apparent that railroads are curtailing their working forces from time to time. He also expressed belief that "their equipment is not in proper condition." Mr. Bates said he had called the White House and asked that the executive branch of the government exercise all authority at its disposal to act to prevent railroad accidents.

Car Fleet Lost 2,530 Units in January

Serviceable fleets of Class I railroads and their car-line affiliates lost 2,530 freight cars in January despite an increase in ownership of 1,703 cars.

The latter was more than offset by the increase in cars awaiting repairs, the bad-order ratio having risen from 4.2% of ownership on January 1 to 4.5% on February 1.

These figures were reported by Chairman A. H. Gass of the Car Service Division, Association of American Railroads in his latest review of "The National Transportation Situation." As to the bad-order situation, Mr. Gass said the increase was caused by a rise in the number of cars awaiting only light repairs. There was a decrease in the number awaiting heavy repairs.

New cars installed in January totaled 4,350—more than in any previous month of the past two years. Retirements of the month totaled only 2,647. Ownership as of February 1 totaled 1,776,137 cars, while the serviceable fleet totaled 1,697,523 cars.

REGULATORY INEQUITIES SHOULD BE ELIMINATED, SAYS SECRETARY WEEKS

"Are we realistic about our federal transportation regulatory policy? The President's Advisory Committee on Transport Policy and Organization, of which I had the honor to be chairman, did not think so. But why? Well, first of all, present policy is not properly adjusted to our traditional free enterprise way of doing business. In the face of widespread and intensive competition, our regulatory policy restrains the common carriers from demonstrating their true cost and service characteristics in price making.

"Public interest requires regulation of transportation, including regulation of pricing, to rule out the possibility of unwarranted price cutting, unconscionably high rates, and undue discrimination. But competition cannot be meaningful without realistic price competition. More reliance on its forces under reasonable control, will bring better, more modern services and lower prices.

"Yet it appears that the present regulatory policy, while imposing heavy obligations on the common carrier industry to provide adequate service at reasonable rates and without discrimination, has permitted other transport forms that are wholly without obligation or under substantially less regulation to make dangerous inroads on common carrier traffic. If the common carrier system is to stay modern and financially healthy, the inequities in the regulatory policy should be eliminated."

Secretary of Commerce Weeks at the Annual Dinner of the New York Traffic Club, February 16.

Aggressive Selling Tested by Pullman

More aggressive selling of railroad passenger business—long a recognized need by passenger officers—is due for an airing by the Pullman Company over the next few months.

First step is under way this week. Working in conjunction with the Burlington, the Missouri Pacific and the Union Pacific, Pullman is conducting a one-month survey in Burlington, Iowa. Its purpose is to develop methods of increasing passenger revenue through local ticket agents.

There will be similar tests in other cities, one on the MP and one on the UP, in April and May. Others may follow during the summer.

Results of the surveys will be tabulated and presented to the entire industry. The test-town idea was sanctioned last September by the American Association of Passenger Traffic Officers.

Some of the methods to be tried out are incentive awards, personal and telephone solicitation of new business, and attempts to upgrade coach passengers to Pullman accomodations.

Ticket agents will be guided at the beginning of each survey by a committee from the three railroads and Pullman, but the actual work will be their own. No special advertising or other promotion will be used locally, as this would tend to distort comparisons with previous months.

3rd Quarter Loadings Above Estimate

The 13 Regional Shippers Advisory Boards underestimated total car loadings of last year's third quarter by 4.6%—but that was the net of 19 underestimates, by commodities, ranging from 0.1% to 13.2%, and 13 overestimates ranging from 2.5% to 31.8%.

That's the showing of the latest comparison of estimates with actual loadings, made by Chairman A. H. Gass of the Car Service Division, Association of American Railroads.

Coal and coke loadings were underestimated 13.2%, and loadings of the group including cotton seed, soybean-vegetable cake and meal, excluding oil, were overestimated 31.8%.

By board districts, there were 10 underestimates, ranging from 1% in the Atlantic States to 21.3% in the Ohio Valley. The three overestimates were 2.7% in the Pacific Northwest, 5.3% in the Pacific Coast area, and 7.2% in the Central Western area.

Trucking 2¼ Times More Risky Than Railroading

The trucking industry's employee injury rate in 1954 was about 2¼ times that of Class I railroads, including switching and terminal companies. The injury frequency rates per million manhours worked were 30.3 and 13.12, respectively.

This was reported by the ICC's Bureau of Transport Economics and Statistics in the latest issue of its "Transport Economics." The railroad figure was based on reports to the commission while the other data came from the Department of Labor's Bureau of Labor Statistics.

The only transportation industry with a better 1954 record than the railroad was the local bus lines with a rate of 10.9. The warehousing and storage industry had a rate of 33.6 while stevedoring's rate was 92.3. Manufacturing industries had an average rate of 11.9.

New Shop Features Wheel-Truing Machine

First diesel locomotive to enter the Canadian Pacific's recently completed diesel-servicing shop at St. Luc yard, Montreal, rolls onto an elevated track. The new shop, for maintenance of Montreal-assigned locomotives, is third of its type on the CPR. A major feature of the new facility is a wheel-truing machine which restores contours of worn flanges and treads without requiring removal of wheels from the locomotive.

Symes Hails Contributions Of Railroad Engineers

The professional engineer is a key man on railroads as well as being the "underpinning" of the nation's economy, Pennsylvania President James M. Symes told the Engineers Club of Philadelphia recently. He said the PRR employs about 700 graduate engineers, "and it's not enough."

Mr. Symes called attention to the contribution of the railroad industry's engineers in preparing plant and equipment to meet the competition of air, highway and water carriers immediately after the recent war—during which the "rails had turned in a whale of a job." The switch to diesel power was the biggest part of this postwar effort, Mr. Symes said, adding that CTC, electronic classification yards, new communications devices, mechanization of track maintenance, high speed ticket and reservation systems, data processing equipment and new passenger equipment are other notable acheivements of the engineers.

IT Ends Passenger Service

The Illinois Terminal has been authorized by the Illinois Commerce Commission to abandon passenger operations as of March 3. Involved are the IT's electric interurban trains between Springfield, Ill., and St. Louis. Operation of the road's bus and street car lines between St. Louis, East St. Louis, Ill., and Granite City is not affected.

INDEX TO VOLUME 139

The index to the latest volume of *Railway Age*, July to December, 1955, is now ready for distribution, and copies may be had by those subscribers desiring them. Requests should be addressed to the Circulation Department, *Railway Age*, 30 Church street, New York 7. Subscribers who have in previous years made application for the index need not apply again, they will receive it as long as they continue to subscribe.

Alaska Non-Ops Get Benefits, Wage Increase

Wage increases totaling over $500,000 for 80% of the employees of the government-owned Alaska Railroad will be granted under an agreement between the road's management and five non-operating unions. Negotiations between the railroad and two operating unions, the Brotherhood of Railway Trainmen and the Brotherhood of Locomotive Firemen & Enginemen, are still underway.

Paul Shelmerdine, Alaska personnel director, said the agreement with the non-operating unions provides for health and welfare benefits and a wage increase similar to those granted to employees of stateside railroads, plus a 25% cost-of-living differential.

GN Safety Record Is Tops For Third Year

Top employee safety record among major U. S. railroads was set for the third consecutive time in 1955 by Great Northern employees.

John M. Budd, GN president, announced last week that the Safety Section of the Association of American Railroads has certified the GN employee casualty ratio of 3.12 per million man hours as the lowest of any carrier in group A. Group A includes the 17 principal lines with 40 million or more man hours worked per year.

Jersey Central Conductor Is FRP "RR Man of Year"

John J. Howley, a railroader for 50 years, has been selected as "Railroad Man of the Year" by the Federation for Railway Progress, according to James G. Lyne, FRP chairman and editor of *Railway Age*.

Mr. Howley, a 64-year-old conductor, is employed by the Jersey Central, but for the past 17 years has worked on a Baltimore & Ohio train which operates over a stretch of JCL track. The award, consisting of a $100 savings bond and a gold St. Christopher's medal, will be presented this month at a luncheon in the Hotel Statler, Washington.

Retirement Board's Billionth Dollar Insurance Payment

A check marking the billionth dollar paid by the Railroad Retirement Board in sickness and unemployment benefits is presented to August Schewe (center), a signal welder for the Chicago & North Western, by Horace W. Harper (right), labor member of the board. Thomas Healy, the board's railroad member, looks on. The special ceremony was held in Chicago.

Hearing on Per Diem Bill Now Set for March 29-30

March 29 and 30 have now been set as dates for the Senate Interstate Commerce Committee's hearing on the bill, S.2770, to authorize the ICC to impose penalty per diem charges to expedite freight car movements. The hearing was previously scheduled for March 20-21 (*Railway Age*, February 20, page 11).

Supply Trade

Clark Equipment Company has opened a new materials handling development center to develop materials handling methods for individual industries. The center, at Battle Creek, Mich., will be equipped with indoor and outdoor "proving grounds" and test areas, with facilities for setting up mock demonstration areas typical of most industries. Space also is available for small seminar groups and large-scale industry-wide sessions.

Robert C. McDowell, chairman of the board of **Wellman Engineering Company,** has also been elected president, succeeding **Dr. J. C. Hodge.**

Toledo Pipe Threading Machine Company has promoted the following to regional sales managers: **Blake Wilson,** north central area; **Marvin Cox,** western region; **R. W. Warnke,** east north central territory and eastern Canada; **W. L. Gahman,** east coast region of New England and middle Atlantic states; and **H. R. Strouse,** southeastern territory, including Texas, Oklahoma, Louisiana and Mississippi.

Beaver Pipe Tool, Inc., has appointed **Gordon Burke** as district manager at Kansas City, Mo.

J. Frederick Byers, Jr., a vice-president of **A. M. Byers Company,** has been elected executive vice-president, and **Albert R. Frame,** general manager of operations, has been elected vice-president in charge of operations.

J. Frederick Byers, Jr.

Charles F. Venrick, formerly Chicago district sales manager of **Alco Products, Inc.,** has been appointed district sales manager in Chicago of the American Car & Foundry Division of **ACF Industries, Inc. David J. Belcher** has been appointed sales en-

(Continued on page 16)

NOW *bid beating... dirt heaping...* 1956

10% bigger payloads!

Model "75" ... boosted to 20 yds heaped (without sideboards) ... 262 hp.

Model "55" ... boosted to 14 yds heaped (without sideboards) ... 172 hp.

Wide-base tubeless tires and windshield, shown, available as optional equipment.

1 **Wider "Target" Push-Block** makes it easier to make and maintain contact. Helps to cut loading and cycle time.

2 **Straight-Line Ejector Reeving** requires minimum power; leaves more power on Payscraper wheels for faster dumping and spreading. Also speeds re-threading time.

3 **Sturdy Cover Plates** protect new, stronger cylindrical ram and air tanks.

4 **New, Straight-Back Bowl** lets you heap and haul more dirt every trip. Struck capacity, *with sideboards*. 18 cubic yds on "75"—12 cubic yds on "55".

5 **Higher Apron Lift,** bigger apron opening, provides cleaner, more rapid dumping, especially of "sticky" materials.

6 **Fast-Acting Apron,** arms mounted outside bowl, assure quick, positive closing of apron. Payscraper holds the load from cut to fill.

7 **Lowered Draft Frame** provides operator with "control tower" visibility of bowl and push-tractor ... also helps direct push and pull power more efficiently to cutting edge for faster loading.

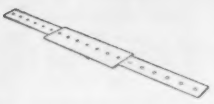
8 **Larger, Wider Fenders** give greater safety for operator, greater protection for machine.

International Payscrapers®

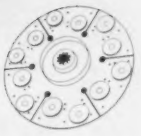
Put the 1956 International Payscraper to work on your job, and watch dirt boil up into its new, straight-back bowl. You've never seen any big scraper load as easily or as fast. In seconds, you've packed in up to 23 heaped yards. Its offset 3-section blade breaks the ground like a sharp-pointed spade. Dirt boils from the smooth-slicing cutting edge and fills the corners to build a full heaped load. Close the apron instantly, positively, on this huge, well-compacted load and you carry all the dirt you've heaped in.

Now, drive easily, effortlessly with safe hydraulic power steering at a fast clip to the fill. Note how the 1956 Payscraper's extremely high ratio of horsepower to capacity and its rapid acceleration to 24 mph top speed add up to more trips per hour than any other self-powered scraper you've ever used. Yes sir, it's a real profitable dirtmover, this 1956 Payscraper! Try one yourself on your job! See your International Industrial Power Distributor for a demonstration.

Maximum 52° Oscillation
from right to left takes the stress and strain out of hauls over furrows, rough ground.



Adjustable 3-Piece Cutting Edge
for clean, fast cutting and loading under all soil conditions.



New, Long-Lasting Clutch
of ceramic material and powdered metals, successfully resists heat and wear over longer periods. Available on Model 75 only.

INTERNATIONAL HARVESTER

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INTERNATIONAL HARVESTER COMPANY, 180 N. Michigan Avenue, Chicago 1, Illinois

A COMPLETE POWER PACKAGE INCLUDING: Crawler, Wheel, and Pipe-Boom Tractors . . . Self-Propelled Scrapers and Bottom-Dumps . . . Tractor and Rubber-Tired Loaders . . . Diesel and Carbureted Engines . . . Farm Machinery . . . Motor Trucks.

Supply Trade

(Continued from page 13)
gineer there, having been transferred from Philadelphia.

George F. McGowan, railroad operations consultant, has been appointed superintendent maintenance **Kaiser Bauxite Company,** Jamaica, B.W.I. He also will be assistant for construction of 40 miles of new railroad and port facilities.

A. H. Whisler, formerly superintendent maintenance of way equipment — system, of the Pennsylvania, has joined the **Frank Speno Railroad Ballast Cleaning Company** as assistant to president.

Rockwell Manufacturing Company has acquired the assets of **Locomotive Finished Materials Company,** which will continue under its present management as a major division of Rockwell.

Robert M. Seely, assistant mechanical engineer of **General Steel Castings Corporation,** at Granite City, Ill., has been appointed mechanical engineer in charge of the engineering department there, to succeed **J. R. Vogel,** resigned.

W. D. Brooks, export manager, **Fairmont Railway Motors,** will devote his time exclusively to the firm's expanding export division, with headquarters at Fairmont, Minn. **Frank G. Simmons** has been appointed Northwest district manager at St. Paul, and **Roger W. Stenzel** has been transferred from the Chicago district office to the Northwest district office.

LEO L. SCHMUECKER, operating manager, Sperry Rail Service, who has been appointed assistant general manager, to succeed W. K. Hooper, resigned.

Daniel S. Sundel, has resigned as manager of "Trailiner" service for the New Haven to become a vice-president of **Piggy-Back, Inc.**

New Ballasting Technique Three Times Faster

Cement mixer trucks with revolving drums are being used by the Chicago Transit Authority to lay ballast for a new rapid transit line being constructed in the median strip of the Congress Street Expressway. Each truck can carry some 17 tons of crushed stone which is distributed to tracks by a chute. CTA claims its crews can lay three times as much ballast using the trucks as they did when stone was dumped at edge of the median strip and then transferred to tracks by link belt loaders.

Financial

ICC Rejects B&M Plan To Trade Bonds for Stock

The Boston & Maine's proposed plan for substituting debenture bonds for preferred stock in its capital set-up has been rejected by the Interstate Commerce Commission. The adverse decision by the commission's Division 4, on the B&M application was based on the road's earning outlook.

The plan contemplated issuance of $28,874,580 of 5% income debentures and $1,374,980 of debenture scrip, to be exchanged for 274,996 shares of 5% preferred stock with par value of $100 per share. The exchange would have been on the basis of $100 of debentures, $5 of debenture scrip, and $5.25 in cash for each share of preferred. Saving on federal income taxes was the principal benefit anticipated. The commission's report said:

"In our opinion, it would tend to impair the confidence of investors in railroad securities generally for this commission to authorize the issue of debt securities, like those proposed here, where it is not reasonably certain that the interest thereon will be paid in years of normal, or even somewhat abnormal, revenues, and where there is such a substantial element of speculative risk.

"In our opinion, in the absence of real necessity, we should authorize the issue of bonds or debentures only when they are sufficiently covered to constitute a reasonably safe and conservative investment. Where there is substantial speculative element, it should be covered by stock instead of debt securities."

Bangor & Aroostook. — *Stock Issue Approved.*—The ICC has authorized this road to issue and sell 29,761 shares of additional common stock and to reduce the par value of its outstanding common stock from $50 a share to $1 a share (*Railway Age*, January 30, page 13). The ICC also has approved issue and sale of $8,000,000 of first mortgage 4½% bonds. Proceeds from sale of the stock and bonds will net the road approximately $1,197,880 and $7,946,400, respectively, and will be used with $986,150 of treasury cash to redeem outstanding first mortgage bonds.

Dividends Declared

AKRON, CANTON & YOUNGSTOWN. — 50¢, semiannual, payable April 2 to holders of record March 15.

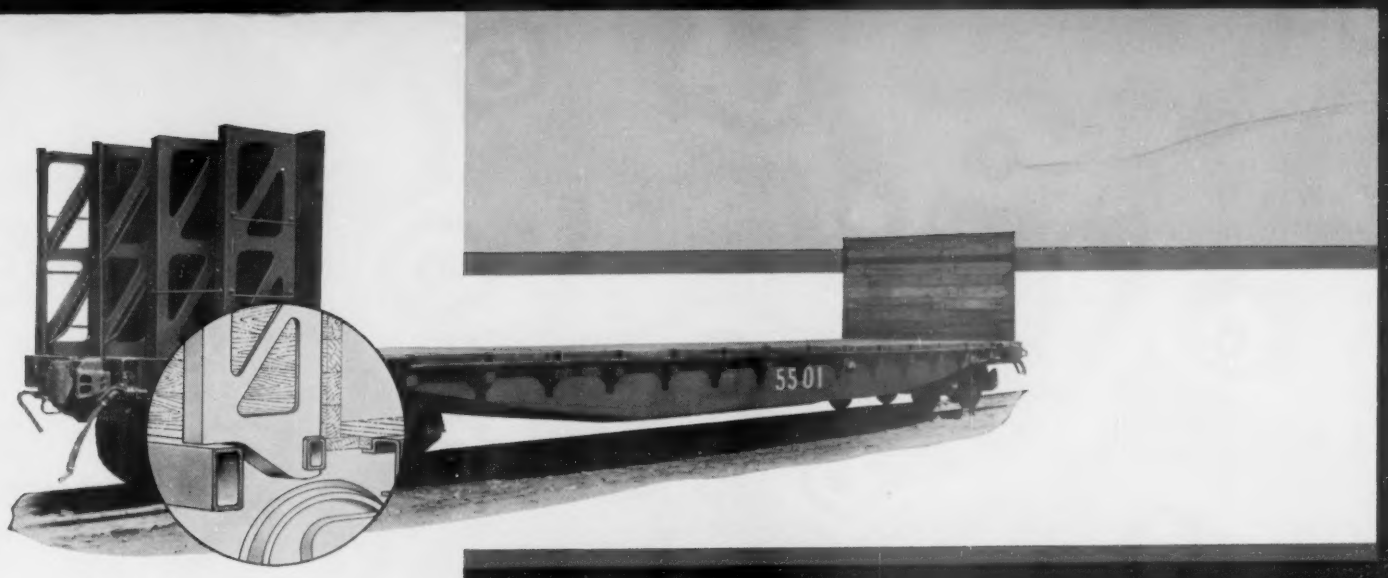
ALABAMA & VICKSBURG. — $3, semiannual, payable April 2 to holders of record March 2.

CHICAGO SOUTH SHORE & SOUTH BEND. — 15¢, quarterly, payable March 15 to holders of record March 5.

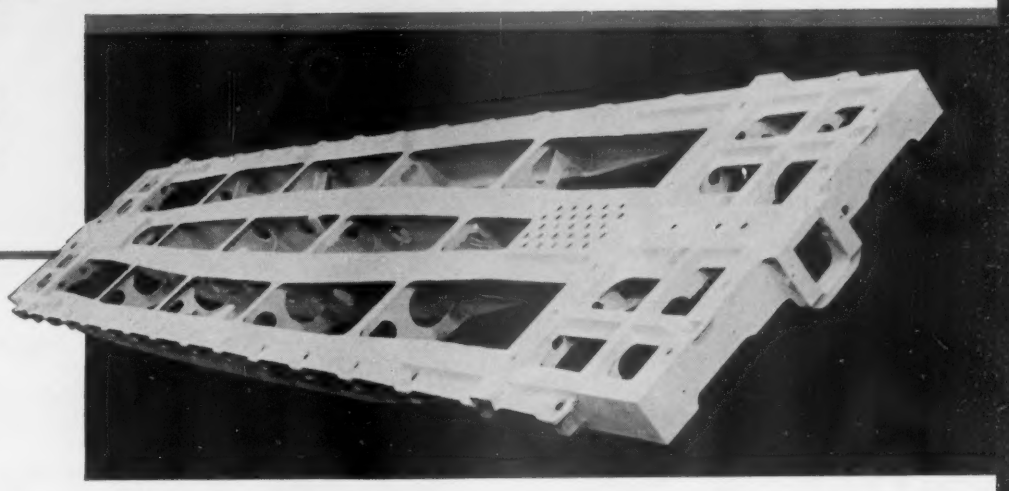
ERIE. — common, 37½¢, quarterly, payable March 30 to holders of record March 9.

ILLINOIS CENTRAL.—87½¢, payable April 2 to holders of record March 2.

(Continued on page 56)



50-ton, 53' 6" bulkhead car with Commonwealth one-piece cast steel underframe and interlocking cast steel ends.



Cast steel flat car underframe designed for application of upright ends.

GET Versatility

with this Commonwealth Underframe designed for FLAT CARS BULKHEAD CARS PIGGY-BACK CARS

Standard Commonwealth one-piece cast steel flat car underframes are especially designed to provide the *extra strength* required when cars are equipped with end bulkheads. The end construction simplifies application of strong cast steel interlocking ends permitting maximum floor space for lading.

Thousands of flat cars with Commonwealth underframes have been in service for many years, proving their exceptionally long maintenance-free life and the *sound economy* of the investment they represent.

Plan wisely for the future — invest in Commonwealth one-piece underframes

GENERAL STEEL CASTINGS

GRANITE CITY, ILL. EDDYSTONE, PA.

Our Mr. Hayes is a destroyer

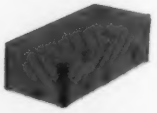
Bob Hayes is listed officially as Supervisor of Experimental Test and Production. But we refer to him as the "Destroyer" and encourage him in his efforts to run an O-P Diesel to death.

There's method in his madness, of course. Each accelerated test, under the worst possible engine operating conditions, condenses years of service into a few hundred hours.

If there's a weak part—we want to find it. If all parts prove strong—we want to find ways to make them stronger, last longer.

This continuing research is an important part of Fairbanks-Morse's customer service. It is the basis for our constant product improvement—part by part.

Fairbanks, Morse & Co., 600 So. Michigan Avenue, Chicago 5, Illinois.



Be sure you get the Dividend of Quality—specify genuine Fairbanks-Morse replacement parts. They are identified by the orange carton—and the Fairbanks-Morse Seal of Quality.

FAIRBANKS-MORSE

a name worth remembering when you want the BEST

DIESEL LOCOMOTIVES AND ENGINES • RAIL CARS AND RAILROAD EQUIPMENT • ELECTRICAL MACHINERY • PUMPS • SCALES • WATER SERVICE EQUIPMENT • MAGNETOS

Federal's

MAIN LINE CONTROL

—the only system for railroad radio presently operating over

CARRIER

Federal Main Line Control is a fast, flexible, and highly versatile system . . . engineered for the rugged communication requirements of dispatchers, wayside stations, trains and other mobile units.

The system operates over any train dispatching telephone circuit, including carrier. Half-second tone codes connect or disconnect wayside stations individually, using Federal's famous "Selecto-Call" tuned reed system.

Train operators can signal the dispatcher over the regular dispatching circuits without disrupting conversation in progress. Dispatchers can answer radio calls without having to know which station called.

Dependable dispatcher-to-wayside intercom is provided through full-range compression amplifiers . . . insuring constant-volume speech under all conditions.

An outstanding optional feature is radio patch . . . providing communications *beyond breaks* in dispatching circuits.

Federal Main Line Control is a product of the worldwide telephone, carrier, remote control, microwave, and mobile radio experience of IT&T engineers. For complete data on your problems, write to Federal's Railroad Division, Dept. P-847A.

● **Providing fast, selective communication between dispatchers and radio-equipped trains . . . via locally or remotely-controlled wayside stations (without interference with normal dispatching circuits) . . . also emergency radio patch to bridge breaks in dispatching wire lines.**

WAYSIDE STATION
Main Line Control Wall Cabinet

DISPATCHER'S Station Control Equipment

Federal

A DIVISION OF I T & T

Federal Telephone and Radio Company
A Division of INTERNATIONAL TELEPHONE AND TELEGRAPH CORPORATION
100 KINGSLAND ROAD • CLIFTON, NEW JERSEY
In Canada: Standard Telephones and Cables Mfg. Co. (Canada) Ltd., Montreal, P. Q.

the BOSTON and MAINE

50-TON 40' 9" PS-1 *standardized box cars*	574
70-TON PS-3 *standardized open top hopper cars*	300
50-TON 53' 0" PS-4 *standardized flat cars*	100
70-TON 2003 CU. FT. PS-2 *standardized covered hopper cars*	26
BOSTON and MAINE standardized car order	**1000**

buys standardization

with a 1000 car order the "Minute Man Route" is first to buy full line standardization

Constantly enhancing its reputation for "Minute Man Service," the pace-setting Boston and Maine relies heavily on Pullman-Standard Standardized Freight Cars for its enviable service-to-shippers record. And the Boston and Maine, with a 1000 freight car order, has become the first railroad to single-order all four types in the Pullman-Standard line of standardized freight cars. This railroad, like 74 others, learned the benefits of standardization through the PS-1 Box Car. "The Minute Man Route" ordered 1950 PS-1s on three previous orders, and found that these cars lived up to the claims made by the nation's leading carbuilder, Pullman-Standard.

Now the Boston and Maine is broadening its use of standardization by purchasing quantities of PS-2 Covered Hopper Cars, PS-3 Open Top Hopper Cars, and PS-4 all-purpose Flat Cars, in addition to more PS-1 Box Cars. With rolling stock of this kind, the Boston and Maine will be able to provide even higher standards of service for its important shippers and consignees.

Pullman-Standard introduced standardized freight cars ten years ago. Since that time railroad-shipper-consignee acceptance of the concepts of standardization has been evidenced by the fact that nearly one out of every four box cars built today is a P-S standardized car.

Standardization means cars that are designed, engineered, produced, tested and in-service inspected. Planned for integrated strength through tested mutually supporting components, standardized freight cars are mass produced and precision crafted by facilities impossible for limited production cars. And the performance of standardized freight cars is confirmed by critical in service inspections.

Learn how the four P-S Standardized Freight Cars are sufficiently flexible in design to be adapted to your needs while providing important price and performance economies. Your inquiry will bring a prompt response.

BUILT TO SERVE BEST ON THE

GREAT AMERICAN RAILWAY
System
BY PULLMAN-STANDARD

WORLD'S LARGEST MANUFACTURER OF PASSENGER AND FREIGHT CARS

PULLMAN-STANDARD

CAR MANUFACTURING COMPANY
SUBSIDIARY OF PULLMAN INCORPORATED
79 EAST ADAMS STREET, CHICAGO 3, ILLINOIS
BIRMINGHAM, PITTSBURGH, NEW YORK, SAN FRANCISCO, WASHINGTON

The Atlantic Coast Line's crack units keep that "Just-Cleaned" look with Oakite Compound No. 88

By happy circumstance the perennial well-groomed appearance of The Atlantic Coast Line's crack units is entrusted to Oakite Compound No. 88 and for this important reason:

Oakite Compound No. 88, when applied to the purple, silver and gold trim of The Atlantic Coast Line's coaches and diesel-electrics even the most stubborn, color-dulling traffic film is safely removed, leaving these delicate tints intact and gleaming.

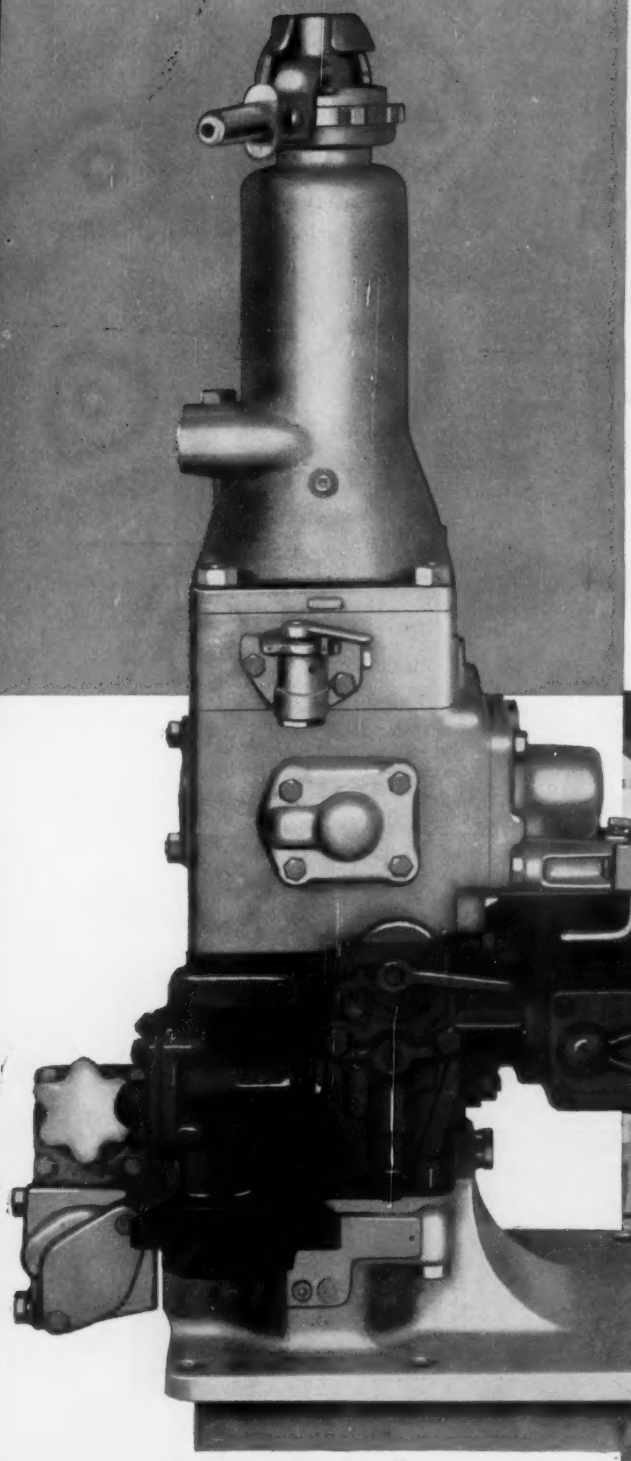
Oakite Compound No. 88 is a scientifically formulated coach-washing compound designed to clean swiftly yet safely. Its energetic wetting-out action provides deep penetration of soils for quick removal. Its complete rinsability assures film-free painted surfaces and streak-free windows.

FREE Booklet F-8055 gives complete description of manual and mechanical exterior car-washing with Oakite Compound No. 88. The Oakite Railway Division Representative in your city will be glad to hand you a copy. Or write direct to Oakite Products, Inc., 46 Rector Street, New York 6, New York.

OAKITE

RAILWAY DIVISION

24RL—the road locomotive brake that can be kept modern



Sectional construction, as followed in the 24 RL Brake Valves, provides for the addition of new or improved functions merely by the substitution of sections. The advantage, of course, is that the brake equipment can be kept modern with minimum investment as compared to entire brake valve replacement.

The most recent improvement that can be provided in this manner is the brake pipe pressure maintaining feature, which offers pronounced improvement in train brake operation plus outstanding maintenance economies that develop from uniform distribution of braking pressure throughout the train.

This feature can be incorporated in any D-24 Type Brake Valve now in service by replacing the existing Filling Piece Portion with the Conversion Filling Piece shown in color in the illustration. Write for our Circular Notice No. 1130 which gives complete details.

Westinghouse Air Brake
COMPANY
AIR BRAKE DIVISION WILMERDING, PENNA.

Westinghouse
Friction Draft Gear
Type NY-11-F
Certified A.A.R.

Friction does it

...and does it well!

Effectively . . . the Westinghouse Friction Draft Gear puts friction to work. For the *smooth start* of a freight train, there is a soft initial action. Then when the BIG impact comes, the Westinghouse Gear is ready instantly with its HIGH shock-absorbing capacity. The initial action blends smoothly into a high ultimate frictional resistance.

In other words, the shock is absorbed by friction before it reaches the car and lading. Thereby, Westinghouse Friction Draft Gear cuts lading damage to a minimum; constantly stands guard against unnecessary rolling stock maintenance costs. Continuing research and development *keep* the Westinghouse Gear practical and economical...as well as effective!

Cardwell Westinghouse Co.
332 S. Michigan Ave., Chicago 4, Illinois
Canadian Cardwell Co. Ltd., Montreal

Specify
CARDWELL
WESTINGHOUSE

LOWEST COST per cylinder mile

HUNT-SPILLER GUN IRON 12¾" LINERS

Shown here is 12¾" x 15½" Hunt-Spiller Cylinder for Diesel Locomotive Engine

The unusual physical properties of GUN IRON combined with Hunt-Spiller's engineering and manufacturing experience have contributed greatly to modern Diesel performance. These properties, found in no other material, will provide long life, even-wearing qualities and a high resistance to water erosion resulting in lowest cost per cylinder mile.

- **Superior resistance to wear without chrome plate.**
- **Superior resistance to water erosion.**
- **Reduced lubricating oil consumption.**
- **Custom fits for older engines . . . an exclusive Hunt-Spiller service.**
- **Choice of finest chrome plate if specified.**
- **Consistent metal quality.**

Write for Free Booklet **H-1 "GUN IRON YOUR KEY TO LOWER COSTS"**

HUNT-SPILLER GUN IRON
HSGI
SINCE 1810
HUNT-SPILLER
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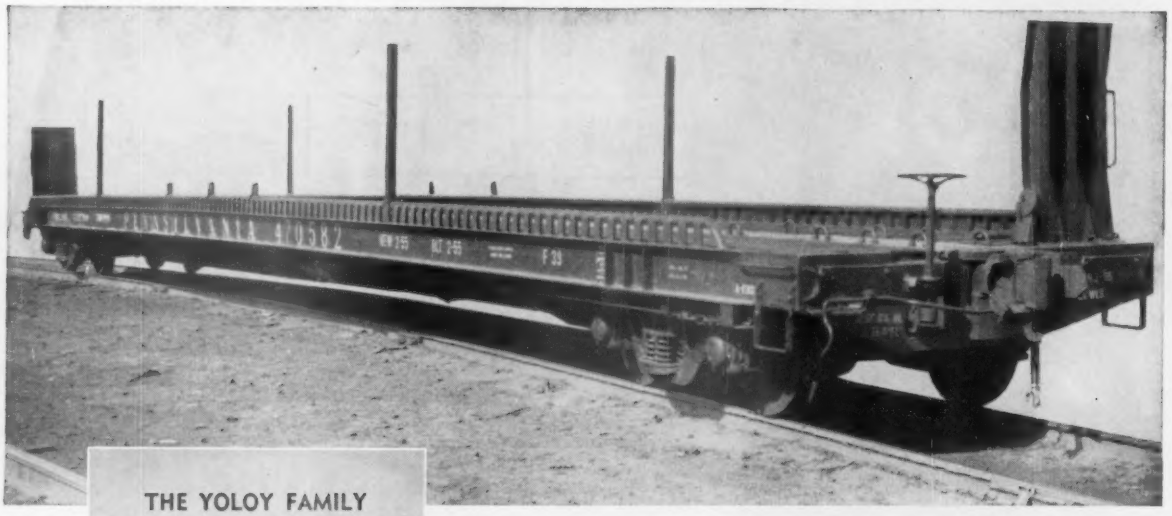
International Rwy. Supply Co.,30 Church St., New York 7, N.Y.

YOLOY E

is backbone of

OPERATION "PIGGY-BACK"



THE YOLOY FAMILY

High in resistance to corrosion, shock and vibration, easy to fabricate, easy to weld.

YOLOY
(Nickel-Copper)
High Strength Low Alloy Steel

YOLOY E
(Nickel-Chrome-Copper)
High Strength Low Alloy Steel

These extra long specially equipped flat cars are the Pennsylvania Railroads new Truc-Train cars designed to haul two fully loaded highway trailers. To reduce dead weight, The Pennsylvania used Yoloy E steel to withstand the heavy concentrations of loads encountered in the long spans between truck center plates.

Yoloy E, The Youngstown Sheet and Tube Company's high strength low alloy steel is made to order for problems such as this. It has a high strength to weight ratio for stronger construction without increasing weight. It is easy to weld and fabricate. Yoloy E will also last many times longer than ordinary steel in atmospheric corrosion and is high in resistance to abrasion and wear.

There is a Yoloy steel to solve your construction problems—write or call your nearest District office for full details.

Youngstown

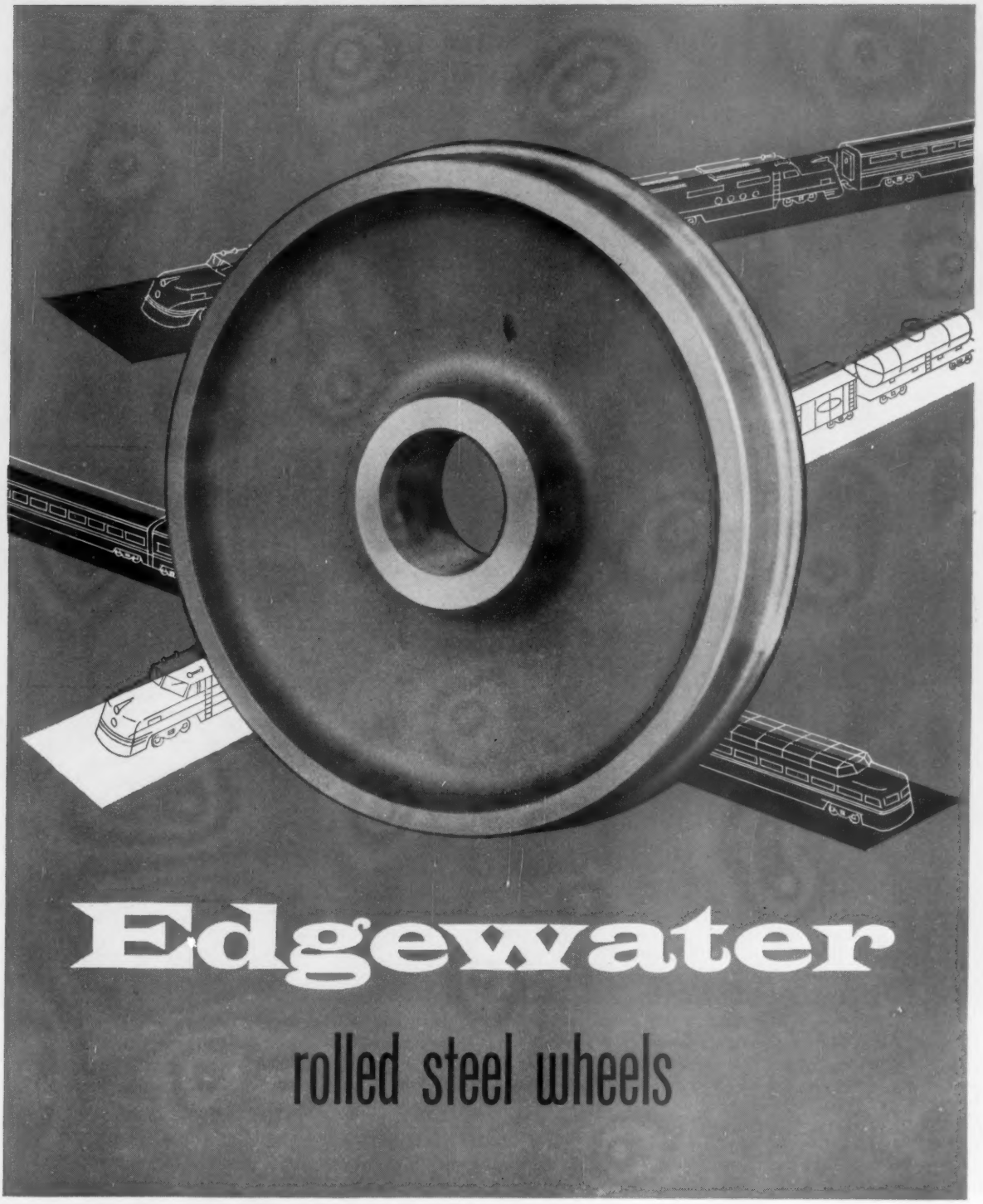
QUALITY YOUNGSTOWN SERVICE

THE YOUNGSTOWN SHEET AND TUBE COMPANY

Manufacturers of Carbon, Alloy and Yoloy Steel

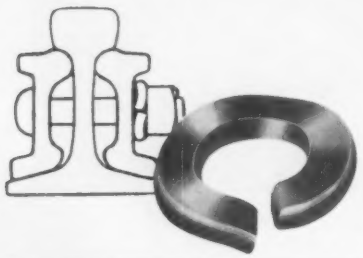
General Offices Youngstown, Ohio District Sales Offices in Principal Cities.

SHEETS - STRIP - PLATES - STANDARD PIPE - LINE PIPE - OIL COUNTRY TUBULAR GOODS - CONDUIT AND EMT - MECHANICAL TUBING - COLD FINISHED BARS - HOT ROLLED BARS - WIRE - HOT ROLLED RODS - COKE TIN PLATE - ELECTROLYTIC TIN PLATE - BLACK PLATE - RAILROAD TRACK SPIKES - MINE ROOF BOLTS



FOR FREIGHT CARS
PASSENGER CARS
DIESEL LOCOMOTIVES

E Edgewater Steel Company PITTSBURGH 30, PA.



IMPROVED HIPOWERS

IMPROVE TRACK

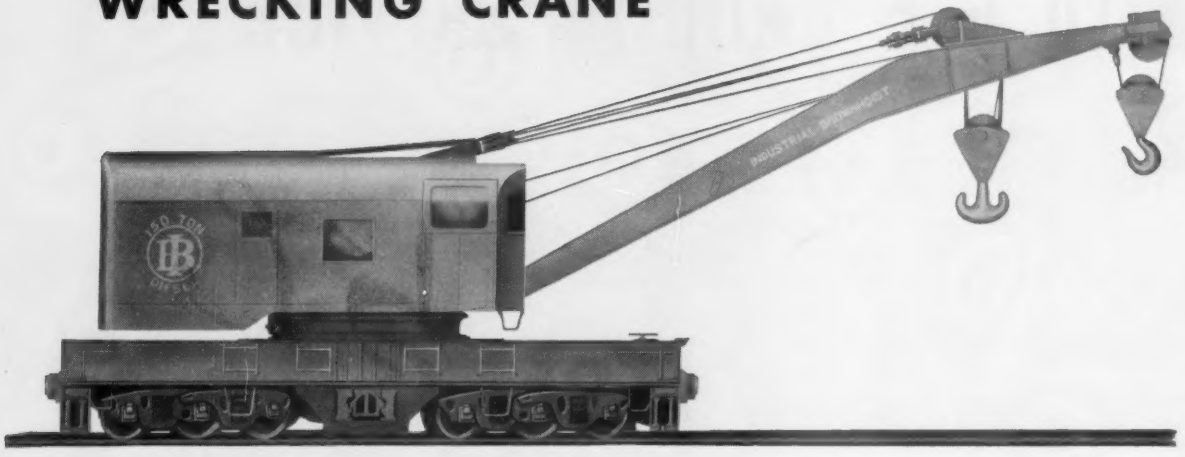
Our immensely powerful spring washers protect railends and joints; they equalize bolt tensions; they absorb shocks and stresses — — they reduce maintenance costs.

THE NATIONAL LOCK WASHER COMPANY, NEWARK 5, N. J., U. S. A.

A COMPLETE LINE OF RAILWAY SPRING WASHERS

NOW AVAILABLE . . .

NEW BROWNHOIST 150 TON DIESEL WRECKING CRANE



INDUSTRIAL BROWNHOIST'S LATEST . . . 150 TON WRECKER DESIGNED FOR REDUCED AXLE LOADINGS

A smaller version of our famous 250 Ton Diesel Wrecking Crane, the new Brownhoist 150 Ton Diesel Wrecking Crane has been engineered to meet rail, bridge, and trestle conditions where a lighter axle load is necessary. With its up-to-date construction, this powerful twelve-wheel Diesel Crane can better perform the railroad services which have up to now been handled by obsolete, inefficient, steam powered cranes with high operating costs. The car is of welded and riveted structural sections with alloy-steel car-side sills, and travels on two six-wheel equalized steel side frame trucks. A quick disengaging mechanism is provided for train travel. The Diesel engine is equipped with torque convertor.

All clutches are air operated including friction reverse clutches. Boom hoist and rotating mechanism are worm-gear driven. The curved wrecking boom is of welded construction with alloy steel members; both main and auxiliary hoist sheaves are equipped with roller bearings; and the auxiliary hoist has a swivel sheave. The operator's position is in the front right hand corner of the cab and the crane controls are arranged for greater efficiency and convenience. The rugged new 150 Ton Diesel Wrecking Crane embodies the principles of design and construction that distinguish all Brownhoist Cranes . . . assuring you of maximum service with minimum maintenance. Write for complete information.

187

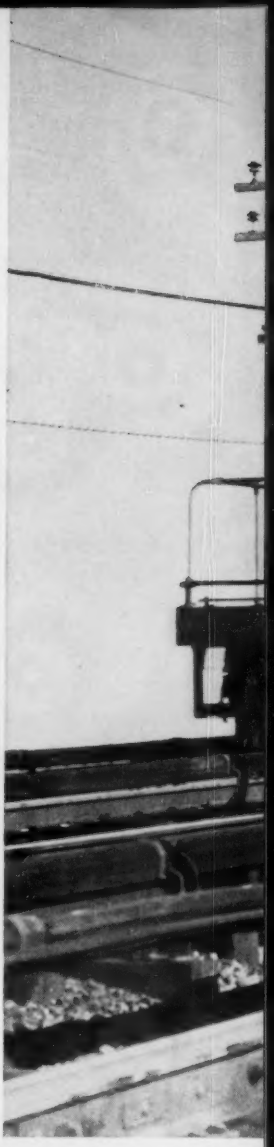
BROWNHOIST

BROWNHOIST MATERIALS HANDLING EQUIPMENT GIVES A LIFT TO AMERICAN INDUSTRY

SUBSIDIARY OF Penn-Texas CORPORATION

INDUSTRIAL BROWNHOIST CORPORATION
BAY CITY, MICHIGAN • DISTRICT OFFICES: New York, Philadelphia, Cleveland, Chicago, San Francisco, Montreal
AGENCIES: Detroit, Birmingham, Houston

New York Central Locomotives Get 63% Horsepower Boost With G-E Rebuild Service



Twenty electric locomotives, each rating 4250 HP hourly, are now hauling crack passenger trains on the New York Central mainline between Harmon, N. Y. and Grand Central Station. They have replaced between 30 and 40 other New York Central units.

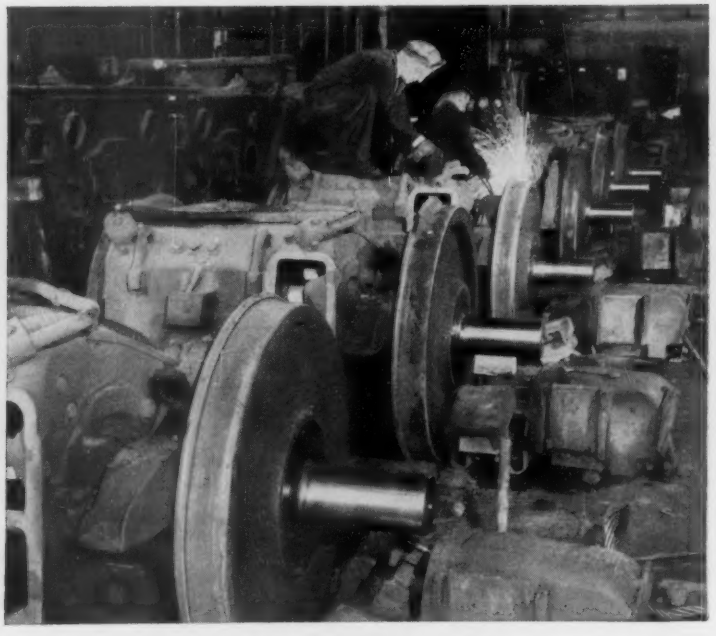
The interesting fact about these locomotives is that two years ago they rated only 2600 HP, and had been retired from service when the Cleveland Union Terminal discontinued electrification. Since that time, General Electric, at the direction of the New York Central, has done one of the most complete electric-locomotive modernization jobs on record.

As one result, these units were given a 63% horsepower boost, but even more important, the New York Central now has a fleet of electric locomotives, in every way the functional equivalent of new motive power, at only a fraction of the cost of equivalent new units. General Electric Company, Locomotive & Car Equipment Department, Erie, Pa. 128-25

Progress Is Our Most Important Product

GENERAL ELECTRIC

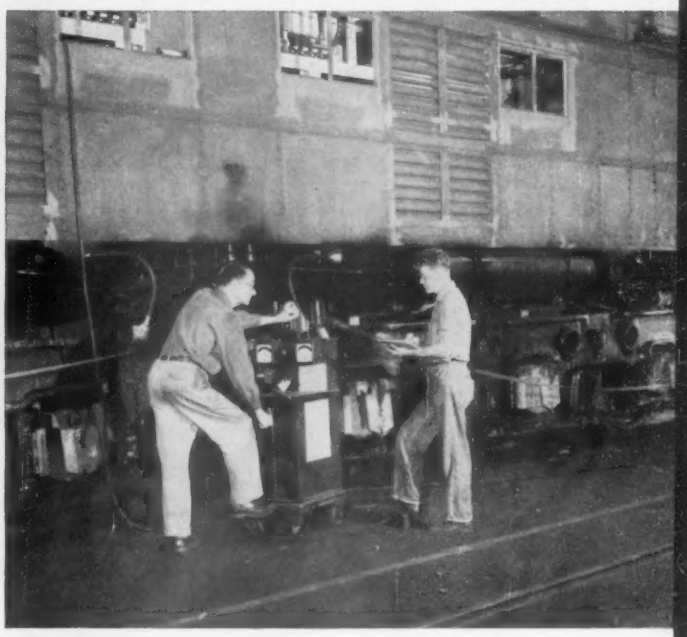
DESIGNED ORIGINALLY FOR 3000 VOLT D-C OPERATION, units were given new modern 600 volt d-c electrical system. Here, old apparatus is stripped from cab at start of modernization.



OLD MOTORS AND AXLES, WITH TWIN SETS OF GEARS, were scrapped. Wheels were reclaimed and mounted on axles designed to accommodate G-E motors with single gears. Journal boxes were reconditioned.

BACK ON THE LINE—HERE'S ONE OF 20 ELECTRICS AFTER COMPLETE MODERNIZATION AT G.E.'S ERIE, PA. PLANT.

USING MODERN COMPONENTS AND UNIT CONSTRUCTION, G-E engineers designed new control to handle 63% more HP in 23% less space. Here, hatch covers are lowered into place after equipment is installed.

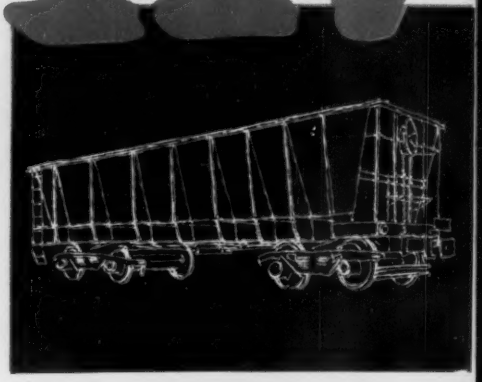


UNITS PASS FINAL HI-POTENTIAL TEST. For facts on rebuild for your locomotive, contact G-E Apparatus Sales Office, or write Section 128-25, Locomotive & Car Equipment, Erie, Pa.

MAKING TEST DATA COMPLETE...

Practically all types of cars now roll on the new steel wheel...

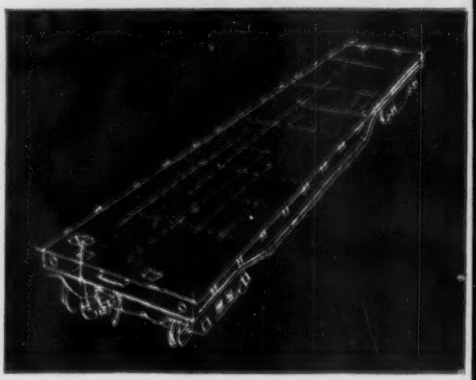
the GRIFFIN

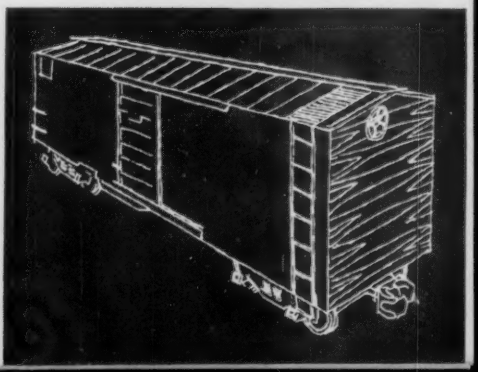


Fifty-five railroads are now using thousands of *new* Griffin EQS steel wheels... *under practically all types of service conditions.*

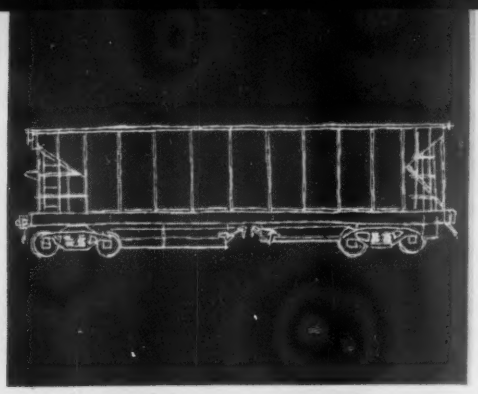
The record of service has been outstanding... it is proving, in the most conclusive possible way, longer life and better wear... *another way of saying lower costs per car mile.*

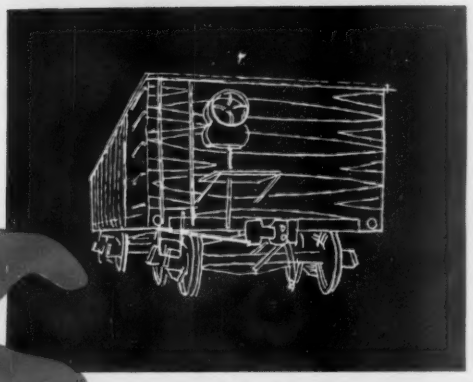
The Griffin EQS wheel comes in fewer tape sizes... accurate in all other dimensions to .020" tolerance ...almost perfectly balanced...and with strong, uniform flanges and rims.





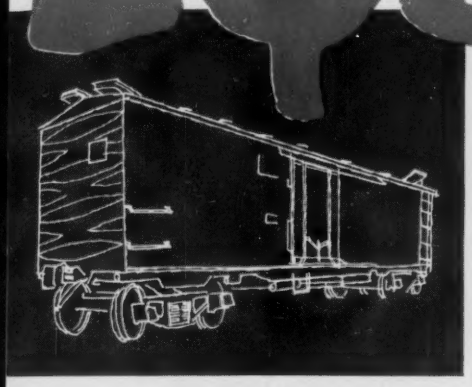
Give the "green" to **GRIFFIN** *and watch your costs go down!*

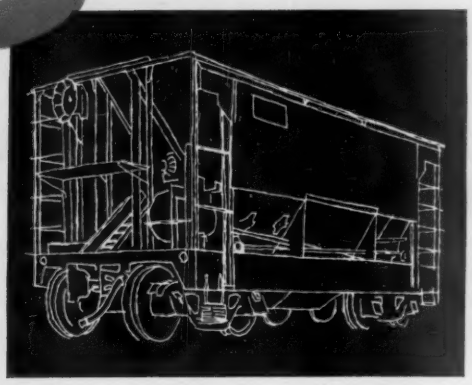


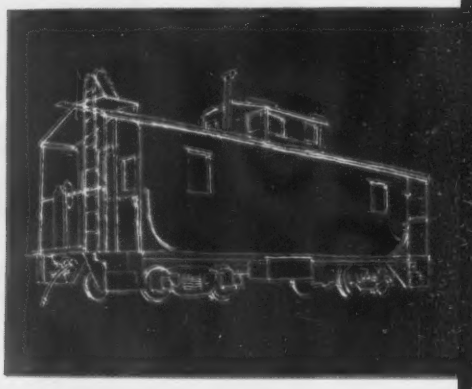


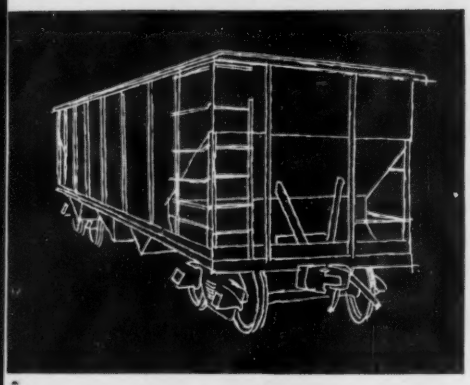
EQS

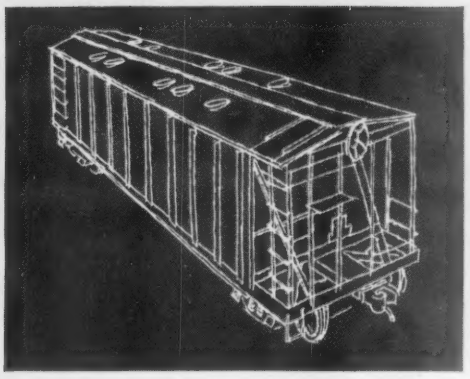
ELECTRIC QUALITY STEEL

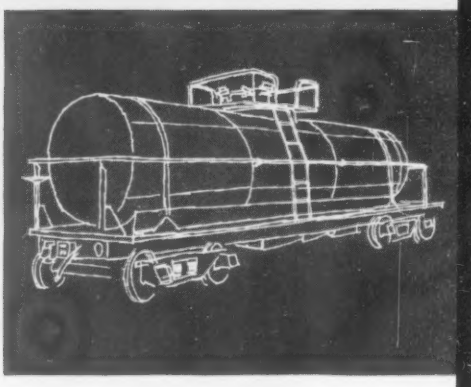


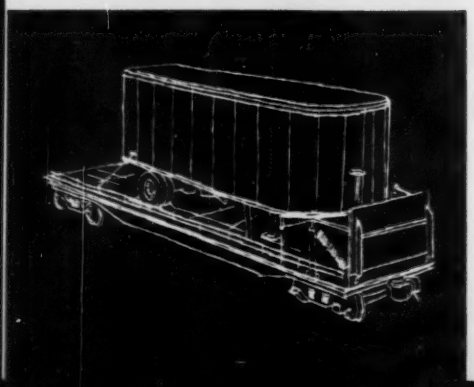










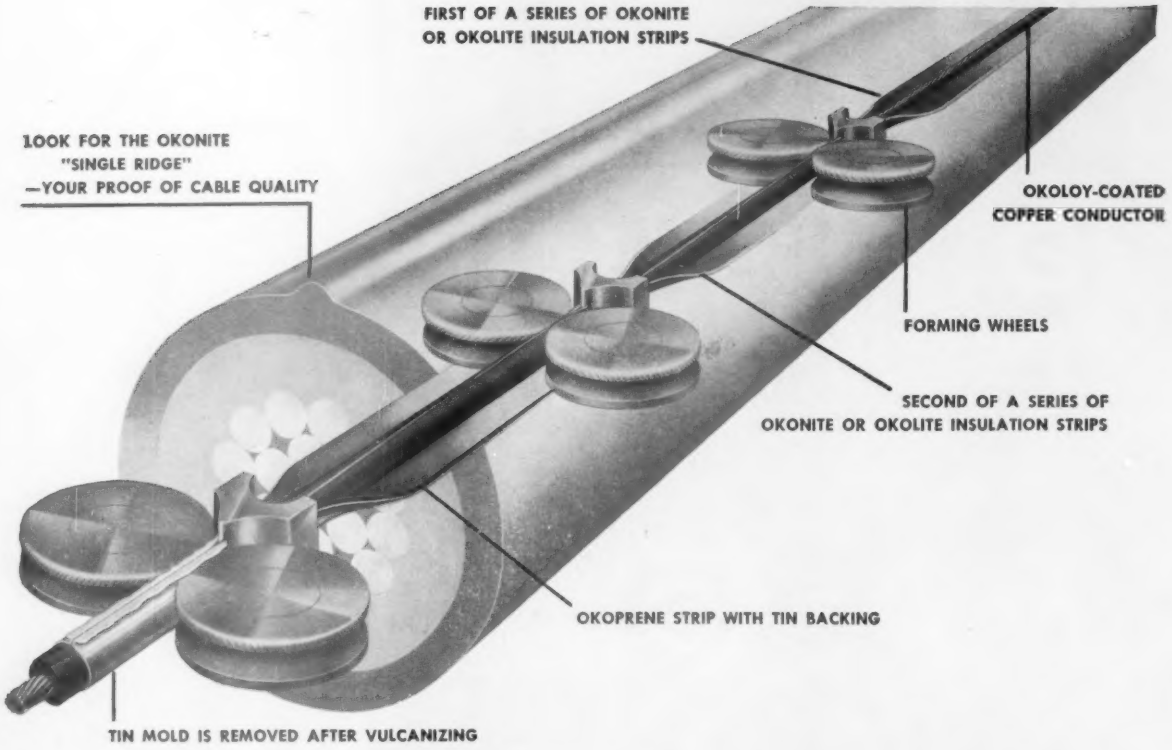


GRIFFIN WHEEL COMPANY

445 N. Sacramento - Chicago 12

Twelve modern plants - strategically located for service

In Canada: GRIFFIN STEEL FOUNDRIES, LTD.
St. Hyacinthe, Quebec


FIRST OF A SERIES OF OKONITE OR OKOLITE INSULATION STRIPS
LOOK FOR THE OKONITE "SINGLE RIDGE" —YOUR PROOF OF CABLE QUALITY
OKOLOY-COATED COPPER CONDUCTOR
FORMING WHEELS
SECOND OF A SERIES OF OKONITE OR OKOLITE INSULATION STRIPS
OKOPRENE STRIP WITH TIN BACKING
TIN MOLD IS REMOVED AFTER VULCANIZING

Why the strip-insulating process assures longer cable life

As one of the oldest manufacturers of rubber-insulated cable, Okonite has made cable by all the known methods, namely the extrusion, dip and strip-insulating processes.

Long experience with these methods has convinced Okonite engineers that the strip process produces cables which are longer-lived and more reliable than those made by other methods. The following advantages explain why Okonite-Okoprene and Okolite-Okoprene cables are made by this method.

Perfectly centered conductors. The strip process is the only one that assures perfect centering of conductor. Insulation is uniform in thickness throughout cable length. There are no "thin spots."

Uniform vulcanization. Vulcanizing under pressure in a continuous metal mold makes the insulation tougher, more dense; physical and electrical characteristics are improved.

Single cure. Vulcanizing insulation and sheath in one operation is possible only with the strip process, thus avoiding shortened insulation life. Multiple vulcanization shortens the life of rubber compounds.

Strong bond. Single, simultaneous vulcanization in a metal mold under pressure insures permanent bond between insulation and sheath. This prevents "push backs" during installation, ionization at potentials above 2000 volts and water blisters in wet locations.

Quality control. Unlike any other method, the strip process permits electrical testing and visual inspection of each strip of insulating and sheathing compound both prior to and during application. These controls assure a void-free, uniform, solid dielectric wall.

Cables manufactured by this strip process have outstanding performance records. Next time you purchase cable for any circuit installation, insist on the *one* cable made by the strip-insulating process . . . specify Okonite-Okoprene or Okolite-Okoprene. For a full review of strip-insulating advantages, write for Bulletin RA 1069; The Okonite Company, Passaic, New Jersey.

OKONITE PASSAIC, N.J.

OKONITE OKONITE SINCE 1878 ***insulated cables***

3138

Needed: A Standard For Train Radio

Within the next 60 days the railroad business has an important target date to keep. At the forthcoming annual meeting of the AAR Communications Section, May 15-17, there will be presented a dimensional standard for train radio, to be applied industry-wide. Between now and then the subject ought to receive prompt and careful consideration from the management of every railroad in the country.

Up to now, each manufacturer of radio equipment has maintained his own standards for mounting racks, plug connectors and overall dimensions of the cases which enclose the electronic equipment —including the transmitter, receiver and power supply. As a result, interchangeability of equipment made by different manufacturers has been impossible.

Need for Interchangeability

In these days of through running of locomotives—and, on an increasing number of roads, cabooses as well—free interchange of radio equipment is a necessity. When equipment fails in service, immediate changeout and replacement by whatever units are available at any important operating point, on any division, are practically a prime consideration.

Furthermore, the Federal Communications Commission requires that the frequency of transmitters be checked every six months. Therefore, roads maintain schedules to change out train radio and send the equipment to a centrally located shop every three to six months. The efficiency of these central shops depends largely upon the flexibility with which they can operate.

When standardization was proposed to the Communications Section in 1949, the idea was squelched. Whatever the cause of the turn-down six years ago, there is, today, no doubt of the need. Within recent months the section's radio committee, with the cooperation of the manufacturers, has prepared a dimensional standard, which is ready for presentation in May. This standard, briefly, calls for the transmitter, receiver and power supply to be in one case, on one rack.

This specification does not solve all the problems of diversity in radio equipment—as, for example, differing power voltages, or the use of three separate cases. It is, however, a step toward logical, basic standardization and should be adopted officially for the benefit of the roads that can use it later as well as now.

This new standard will permit the railroads to use radio made by *any* manufacturer. Economies in first cost and maintenance should result. Henceforth, the manufacturers can concentrate on one dimensional design for all railroads. Orders can be filled promptly. At the same time, the standard will not freeze design, and will not hamper manufacturers from making improvements.

In the offing is the introduction of transistors. Up to now, train radio has utilized conventional electronic tubes. A large percentage of radio failures are caused by breakage of tube filaments. Within the past few years, transistors—which have no filaments to break—have been developed as a substitute for tubes. Starting this year new railroad-use radio employing transistors in part will be placed on the market. When completely transistorized, railroad radio will have fewer failures in service, and can be made to weigh much less.

The weight of a transmitter, receiver and power supply in one case, as made by some manufacturers today, is about 45 lb, which quite likely can be reduced about 15 or 20 lb, by the use of transistors throughout. This reduction in weight is an important factor when equipment is to be changed out in a hurry.

The new standard with respect to plug-connectors, rack and overall maximum dimension should be adopted as soon as possible so as to apply to new transistorized equipment.

Some manufacturers think so well of the proposed standard that they are ready to make 1956 delivery of equipment conforming to it. Other suppliers may contend, with good reason, that the railroads should adopt the standard officially before expecting the manufacturer to make extensive changes in dimensions.

The history of technical progress in railroading is closely related to progress in standards for interchangeability. During 100 years' continuous publishing, *Railway Age* has found itself in the forefront of the advocates of industry standards. For almost a decade, for example, it fought for standard screw threads—an elementary step to moderns, but in the 1870's a hard battle, requiring editorial vigor and forceful documentation.

In these days of fast change, new ideas find acceptance more easily. The proposal for dimensional standards in train radio should sell itself.

BY 1957 A NEW TYPE LOCOMOTIVE, BECAUSE . . .

Gas Turbines Can Burn Coal

Eleven years of extensive and expensive research pay off as the laboratory phase of the coal-fired gas turbine research is expected to end in 1956

Actual building of the world's first coal-fired gas turbine locomotive is expected to be under way in 1957, according to R. B. White, chairman of the Locomotive Development Committee. Eleven years of research have yielded a coal-fired gas turbine combustion system which has operated satisfactorily under extended high load tests and in locomotive type service. The turbine has successfully used a variety of different coals. Mr. White's announcement revealed that it is expected the research program will be concluded at Dunkirk this year after doing some additional work on coal handling, combustion and ash separation.*

Tests run during the latter half of 1954 showed that the ash separation equipment developed at Dunkirk could protect a gas turbine from fly-ash erosion. The committee then authorized a series of continuous high load tests and 600 hours of coal-fired operation as the operating program for 1955.

During the course of the 1955 high-load tests, the Union Pacific became interested in the program. Although not a member of LDC, the UP supplied Wyoming coal which LDC tested in the Dunkirk turbine. In addition to continuous high loads, actual locomotive loading cycles for the New York Central, Union Pacific and Norfolk & Western were used as the basis for nearly half of the plant operating time.

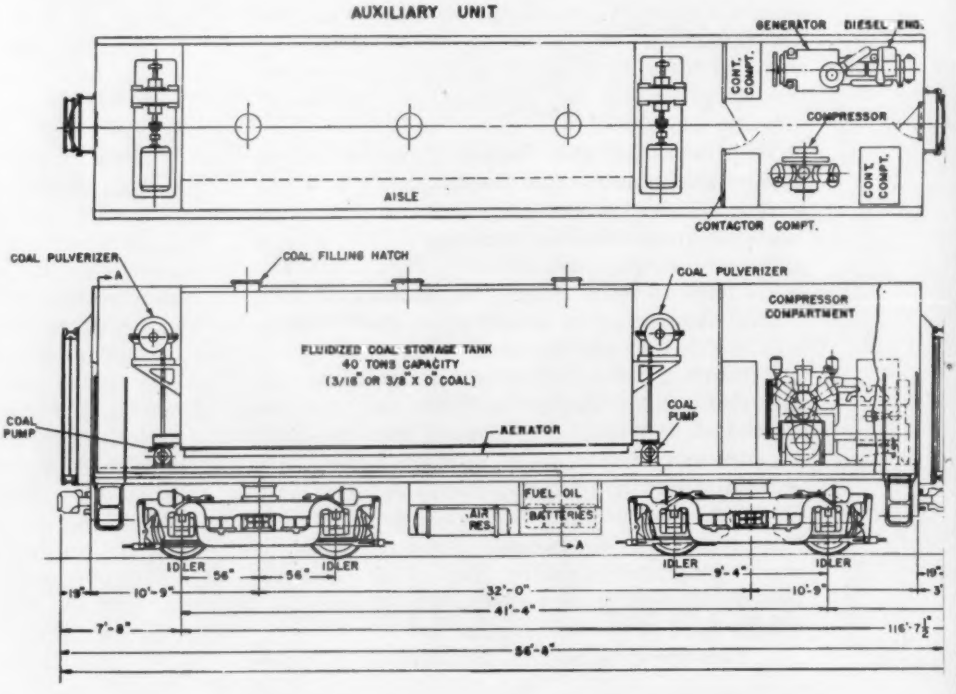
As an example of the continuous high-load operation in 1955, the plant operated from 2:44 p.m. on February 21 until 7:41 p.m. on February 23 at an average load above 3,600 hp—a load factor of 102 per cent. During the thirteen days following March 21, the plant was operated for 233 hours at an average load of 3,400 hp—96 per cent of the turbine's rated 3,540-hp capacity—and did this with a thermal efficiency of 20 per cent. High load testing consumed 1,413 tons of coal in 852:37 hours at a cost of $6,710 when adjusted to include average on-line railroad handling charges.

No lubricating oil was added during the entire 1955 operation.

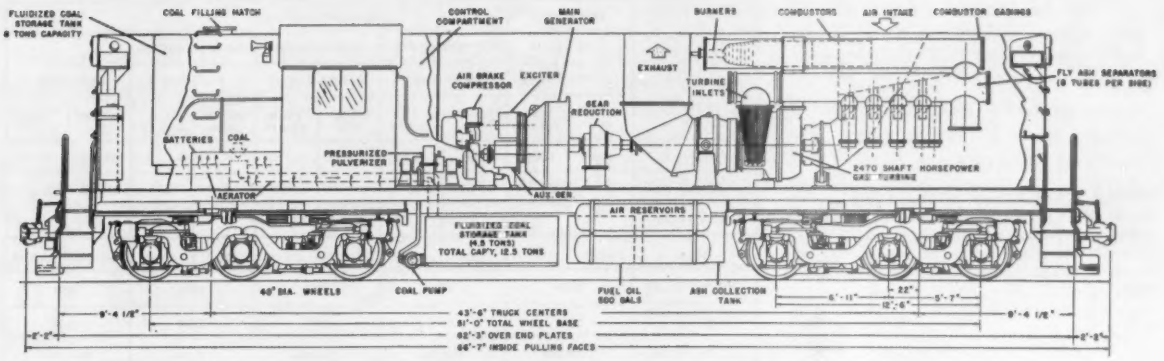
If this average load of 3,200 hp had been carried by diesel engines for 852:37 hours, LDC reports these engines would have consumed 167,000 gal of diesel oil and 2,000 gal of lubricating oil at a total cost of $18,870. This figure is based on the average cost of diesel fuel to LDC members during the first six months of 1955.

By April 19 and with 633 hours of running at 92.5 per cent load factor, it was decided to undertake cycling runs which would be more representative of actual loco-

*A progress report on development of the turbine and fuel system appeared in *Railway Age*, April 19, 1954, p. 44.



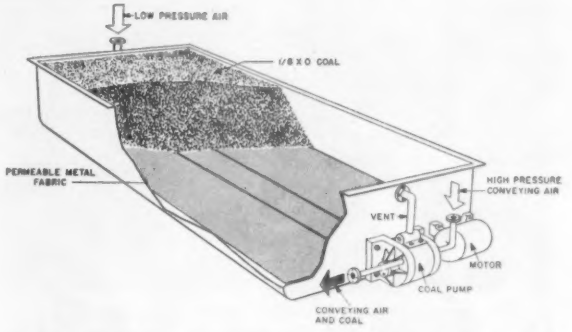
PRESENT LDC gas turbine could be installed on a six-motored A-unit with fuel handled on a C-unit tender. Rated at 3,600 hp, the locomotive would have fuel for 30 hours of operation. A 7,200-hp locomotive could be obtained by coupling a second A-unit at the rear.



GAS TURBINE installation replacing the diesel engine in an Alco DL600 road switcher would produce a 2,500-hp locomotive. Part of the fuel would be stored in space provided for steam generator on this unit.

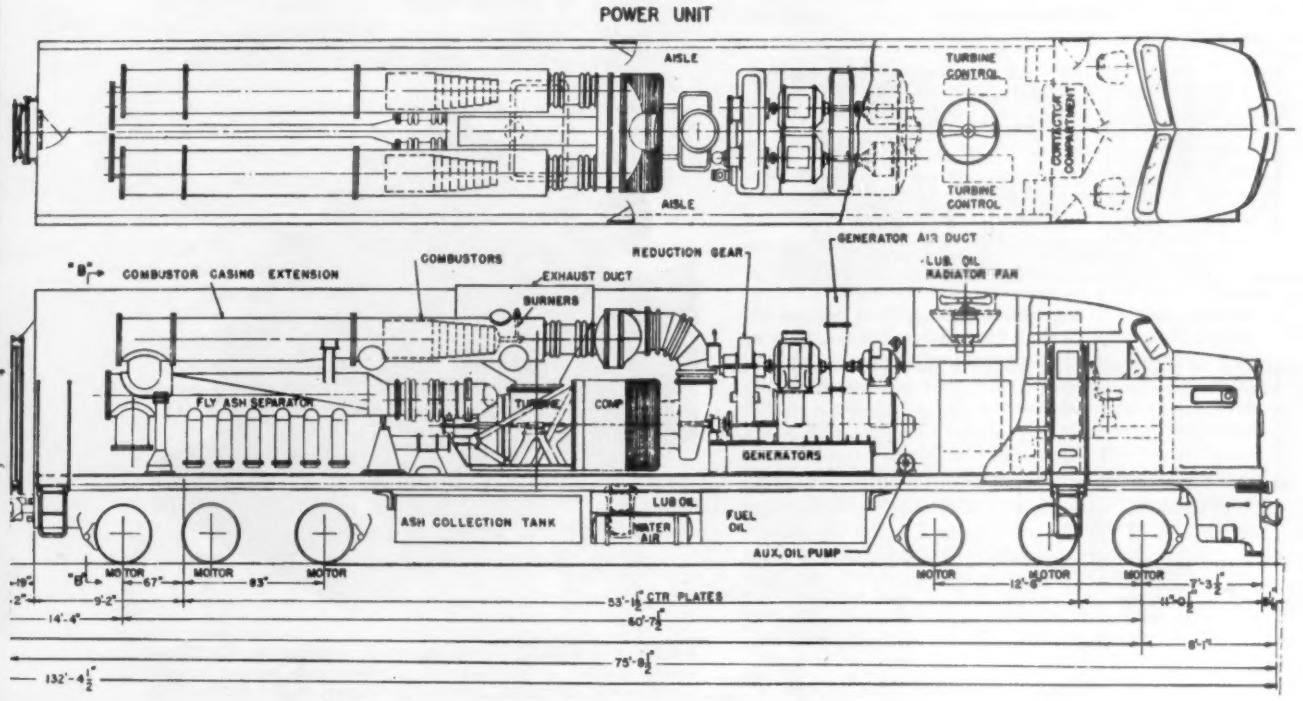
motive requirements. This began on April 20 and continued for 568:34 hours. The plant was operated continuously as far as possible without shutting down between individual runs. The New York Central cycles were not intended to represent specific runs, but were typical of NYC passenger and freight operation. Both the Union Pacific and Norfolk & Western cycles were to duplicate operation over definite districts on each railroad. The committee reported that fuel consumption during cycling operation verified the prediction that the fuel cost for a coal-burning gas turbine locomotive will be substantially less than for a diesel doing the same job.

NYC coal cost $4.20 per ton and an average NYC on-line handling charge of 69 cents per ton brought the total to $4.89. The test of 275 hours at an average load of 2,570 hp used 389 tons of ⅜-in. or smaller Pittsburgh coal, and cost $1,805. A two-unit diesel doing this same amount of work would have used about 45,000 gal of fuel oil costing $4,700 and lubricating oil costing $280—



COAL BUNKER with permeable metal fabric bottom would be one part of the complete fluidized coal-handling system on the gas turbine locomotive.

a total cost of $4,980. The saving is 63.6 per cent. If the locomotive operated at the same high load factor

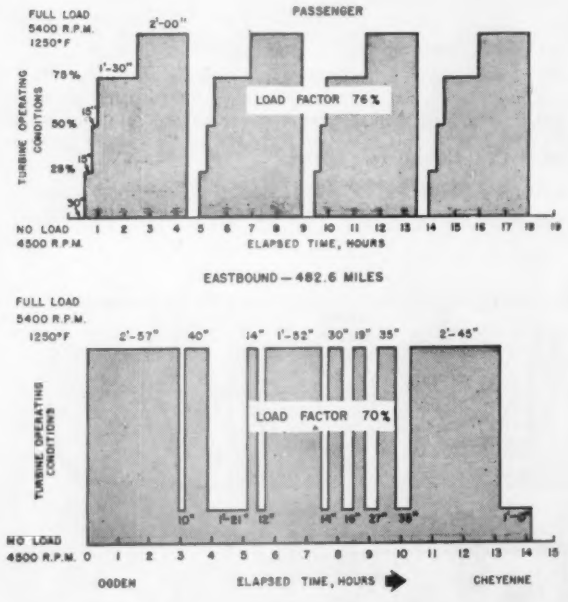


During 1,421 hours of the 1955 coal-fired test program 4,111,398 hp-hr were produced at Dunkirk with an overall efficiency of over 18 per cent at an average load factor of 81.7 per cent.

	HIGH LOAD		LOCOMOTIVE LOAD CYCLES						TOTAL	
	1/15 - 4/19 5/24 - 6/9 6/30 - 7/22		NEW YORK CENTRAL 4/20 - 5/23		UNION PACIFIC 6/13 - 6/28		NORFOLK & WESTERN 7/25 - 7/28		1/15 - 7/28	
	HOURS RUN	TONS BURNED	HOURS RUN	TONS BURNED	HOURS RUN	TONS BURNED	HOURS RUN	TONS BURNED	HOURS RUN	TONS BURNED
POC. NO. 5	335:41	548.95	42:25	59.18					378.06	608.13
PITT. NO. 8	516:56	863.80	232:40	329.85			49:57	76.50	799:33	1270.15
UNION PACIFIC					243:32	370.00			243:32	370.00
TOTAL	852:37	1412.75	275:05	389.03	243:32	370.00	49:57	76.50	1421:11	2248.28
AVE. LOAD. HP	3300		2571		2253		2560		2894	
AVE. COAL RATE LB. PER HR	3314		2830		3039		3058		3164	
TOTAL HP HR	2,727,638		707,282		548,606		127,872		4,111,398	
LB. PER H.P. HR	1.036		1.10		1.35		1.19		1.09	
THERMAL EFF., %	18.80		18.25		16.1		17.5		18.20	
LOAD FACTOR, %	90.27		72.6		63.6		72.3		81.7	

for an average of 4,000 hr per year, the potential saving would be $46,000.

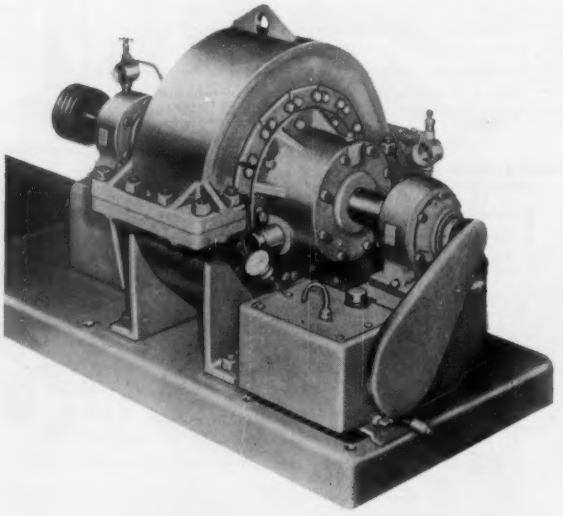
The Union Pacific set up the loading schedule to represent its freight operation both ways between Cheyenne, Wyo., and Ogden, Utah. During the 12 days of this test, 8,290 miles of operation were simulated, and 1,722,000 ton-miles were accumulated burning Wyoming coal at the rate of 42.8 lb per thousand gross ton-miles. This operation simulated handling a 2,080-ton train at an average speed of 34 mph eastbound and 37 mph westbound. A total of 370 tons of UP coal were burned during 243:32 hours of test. At an average load of 2,253 hp, a thermal efficiency of 16.1 per cent was obtained. Nearly 50 hours of operation on Norfolk & Western cycles were to represent runs in both directions between Portsmouth, Ohio, and Williamson, W. Va.



Examples of the load cycles imposed on the Dunkirk gas turbine to reproduce typical New York Central and Union Pacific road locomotive operations.

At the end of the 1955 program, and after 1,421 hours of operation, the test plant at Dunkirk was completely dismantled for examination and evaluation of wear. The concave surfaces of the rotor blades were clean although a small amount of ash adhered to their convex surfaces. There were some thin ash deposits on the stator blading. Blade erosion had been very slight and it is expected that changes in blade design can eliminate some localized conditions.

The combustion and fly ash equipment was found to be in good condition. Combustors have seen over 2,750 hours of coal burning operation and are still serviceable. Control of the plant by variation of the coal pump speed has been satisfactory and substitution of wear-resistant materials should eliminate all troubles that have been encountered in the coal pump. This pump will be the throttle for the power plant. Shut-downs during the operation of the plant were chargeable principally to



RILEY PULVERIZER which would operate in the 90-psi fluidized coal stream is much smaller than earlier models which would have had to crush lump coal on the locomotive.

automatic ash blow-down equipment, to the coal pump and to the instrumentation.

Original work by LDC anticipated burning any type and size of coal with any state of dryness. This idea has been discarded and replaced with the concept of burning coal fines (3/16-in. and down) dried at the mine, shipped in covered hoppers, and stored, conveyed and handled on the locomotive with compressed air and the aerator system which fluidizes the entire coal bed. This will end any necessity for driers and complicated pulverizers on the locomotive and permits locating the fuel tank underneath. Since the amount of crushing that must be done has been so reduced, a smaller pulverizer has been designed jointly by LDC and the Riley Stoker Company.

The building-block principle of assembling an appropriate locomotive from medium-powered units has become a well-established practice on American railroads. Present LDC locomotive proposals envision a single 2,500- or 3,500-hp gas turbine on each unit, with provision for multiple-unit operation if more power is desired.

WHAT IS LDC?

In 1945, under the urging of Roy B. White, then president and now chairman of the board of the Baltimore & Ohio, a group of eastern railroad and coal company executives established the Locomotive Development Committee. Formed as a part of Bituminous Coal Research, Inc., LDC was to develop a locomotive capable of burning coal more efficiently than the 40,000 steam locomotives then in service.

Interest in the continued use of coal as a locomotive fuel came from concern over fuel supply in event of another major war, and the attractiveness of a fuel cost per heat unit only one fourth that of diesel oil. Since 1945, about $4,500,000 has been spent on this development.

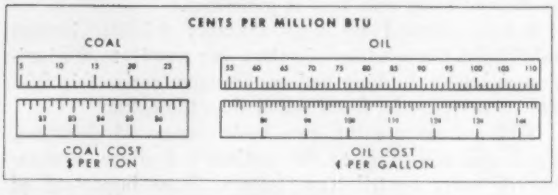
The rapid adoption of the gas turbine in aircraft, and successful use in stationary and other mobile applications were the basis for original optimism. The open-cycle gas turbine burning heavy oil was already powering a locomotive on Swiss railroads. Closed-cycle and exhaust-heated-cycle power plants were considered. They would eliminate the problem of blade erosion by fly ash, but would introduce heat exchangers that were rated impractical for locomotive service.

The problems that confronted LDC in producing a coal-fired open-cycle gas turbine have been summarized as follows:

- **Feeding coal of suitable size to a pressurized combustion chamber under instant control at rates ranging from 500 to 5,000 lb per hr.**
- **Burning the coal with a 90 per cent combustion efficiency with temperature rises from 200 to 900 deg F and outlet temperatures from 700 to 1,300 F.**
- **Prevention of troubles caused by the ash content of the coal.**

Research on these separate problems was carried on by a number of organizations under contract to LDC. Many concepts have changed during eleven years' research, and many problems have been encountered.

While two gas turbines were originally ordered, only the one built by Allis Chalmers was delivered. It has been used for the experimental work done by LDC at the Alco Industries plant at Dunkirk, N.Y. Rated at 4,250 hp when delivered, this prime mover now has a rating of 3,500 hp because blade material suitable only for lower temperatures was used during a reblading.



R. B. White P. R. Broadley

Economic Comparisons

Today the economics of the coal-fired gas turbine have not changed. Roads that originate bituminous coal on their own lines pay approximately 20 cents per million Btu including on-line charges. Diesel fuel averaging approximately 10.8 cents per gal for LDC member roads costs approximately 83 cents per million Btu.

P. R. Broadley, LDC director of research, joined the project in 1947 and is on leave from his position as mechanical engineer of the Jersey Central. Members of LDC now include Alco Products, the Baltimore & Ohio, Chesapeake & Ohio, Louisville & Nashville, Illinois Central, Norfolk & Western, Virginian, Nickel Plate, M. A. Hanna Company, Island Creek Coal Company, Pocahontas Fuel Company, Pittsburgh Consolidation Coal Company, and the Sinclair Coal Company. While this development can have far-reaching effects for all producers and consumers of power, LDC members have by themselves supported research which is producing this radically different power plant. Nowhere else have such results been achieved—something that should refute the assertion that railroads and their suppliers do not support research.

BALE FIRES such as this are costly. Cotton-carrying railroads paid out $3.21 from every $100 of revenue in 1954. Research is being pushed because fire losses point up need for . . .

Ways to Cut Cotton Fires

In-transit fires are taking a heavy bite out of revenues from cotton shipments—The SP has some answers

Railroads are paying out a thumping annual claim bill for fire losses on baled cotton moving in box cars.

Latest figures compiled by the AAR's Fire Protection & Insurance Section are little short of startling: Cotton fires in 1954 cost the railroads just under $2 million; they accounted for nearly 16% of all fire losses during that year; and, for each car of cotton originated, the fire loss averaged a record $8.66.

This situation did not develop overnight. Since 1946, the cotton fire loss problem has grown worse steadily. As shown on the accompanying chart, loadings have held within a reasonably narrow range. Meanwhile, the loss per car originated has pushed higher and higher.

Thus it is not surprising to find cotton fires getting increased attention from individual railroads, the National Cotton Council and the AAR's Freight Loss & Damage Prevention Section.

One major study of the problem was completed only recently. The Stanford Research Institute, at the request of the Southern Pacific, spent 16 months digging into the causes and remedies for such fires. Here's what the institute reported:

There are two major, and approximately equally important, direct causes of in-transit cotton fires—metal sparks and high intensity friction.

- Fires caused by metal sparks involve contact between steel surfaces in such a way that a steel fragment is sheared away and heat is generated.
- Fires caused by high intensity friction involve raising the temperature of cotton (or wood) to the ignition point by rubbing action. In some cases, this friction sets fire to the wood rather than the cotton.

While these are the two basic causes of the fires, there are, according to the institute's findings, a number of other contributing factors. Most important of these are moisture content of cotton, terrain traversed,

train speed, condition of the freight car, type of wrapping, type of buckle and season of the year.

"Moisture content, terrain, and train speed are of such consequence that if moist cotton were shipped over flat terrain at moderate train speed the problem of in-transit cotton fires would not be a serious one," the researchers reported.

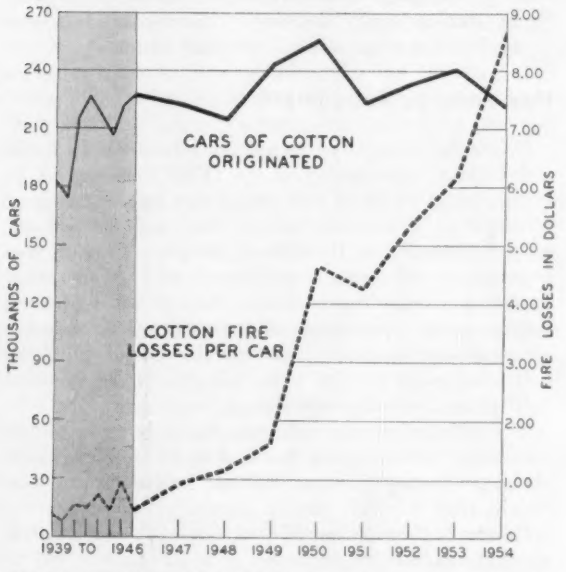
The loading pattern inside the car, as well as the handling of the car, are other items which the research group considers "probably important." Spontaneous combustion, on the other hand, is not believed to be an important factor at all.

What to Do

Several suggested remedies for in-transit cotton fires were contained in the institute's final report to the SP. Some of these—modification of the baling technique, use of sugar bagging, coating of buckles and improving their design—seem clearly up to shippers to correct. Others, such as use of tight loads and providing cars suitable for cotton loading, are factors the railroads themselves can police.

Although a material reduction in the number of cotton fires certainly is possible, complete elimination remains unlikely. When they do occur, the SP has developed a new method of extinguishing them with a minimum of damage loss.

When fire is discovered inside a carload of cotton, the car is isolated and side doors are kept closed. Location of the fire inside the car is determined either by observing the blistering paint or by feeling various sections of the car with the hand. Once the fire is located, a hole is cut directly overhead in the car roof to allow insertion of a fog nozzle. Wet water is then applied until the fire is extinguished. If railroad employees are the only individuals fighting the fire, a waiting period of at least one hour is recommended before the car doors are opened and the cotton unloaded.



IN-TRANSIT COTTON FIRES have increased drastically since World War II although cars originated held fairly level. The big question: Why?

Benchmarks and Yardsticks

THERE IS A LOT OF DISCUSSION going on in large cities in various parts of the country about the necessity for providing mass transportation by rapid transit, where it doesn't exist, and improving transit service, where it does exist. The reason, of course, is that excessive use of automobiles in crowded cities has brought intolerable traffic problems — near strangulation in some places. Yet people are going to keep on using their automobiles for intracity travel, unless satisfactory service by transit lines affords an acceptable substitute for individual transportation.

One of the frequently quoted authorities on this subject is Col. S. H. Bingham, retired head of the New York City Transit Authority, who in a recent Boston speech touched upon many of the suggested improvements in rapid transit service which might increase its popularity with the public—among them the monorail experiment in Houston, and possible use of the conveyor-belt in some places. He also advocated the physical connection of railroad commuter services with rapid transist systems.

Another exponent of improving the quality of urban transit is Henry K. Norton, chairman of the NYS&W, and the designer of a suggested new form of overhead urban rapid transit. In a New York Railroad Club address on February 23, Mr. Norton told a couple of stories to illustrate his contention that urban transportation conditions cannot be permanently improved by the construction of new highways.

He told of a housewife who complained to the police that there was a skunk in her cellar. She was advised to lay a trail of bread crumbs from the entrance to the cellar to the outside, with the purpose of luring the unwelcome visitor away. A short time later, the housewife called the police again—in even greater distress. Now, she explained, there were two skunks in the cellar.

The other anecdote had to do with a couple of workingmen in a caisson down in the water, who found conditions a little too moist for them; and who drilled a couple of holes in the caisson to let the water out. This is what Mr. Norton contends is happening to the cities that are trying to solve their traffic problems by the construction of arterial highways.

Mr. Norton's point is that, the more surface transportation facilities are enlarged within a city, the more new congestion-creating traffic is invited to come in; hence that, really to solve the problem, facilities are necessary to distribute people efficiently by other-than-surface methods. The alternative to finding a solution to this problem may well be stagnation and decay at the heart of all our great cities.

J. G. L.

MOTOR CAR is inside of truck body and push car is carried on outside of tailgate.

TAILGATE has been lowered to ground where it is a simple matter to remove the push car.

Section Toolhouse on Wheels

Special trucks used by reorganized track forces carry motor and push cars in addition to men and tools — New set-up has alternating large and small gangs — Greater flexibility is achieved

Piggyback in reverse—with railway equipment riding on highway trucks—is featured in a new maintenance-of-way set-up on the TP&W. Special trucks, each designed to carry a track motor car and a light push car as regular equipment, along with men and the usual tools, are used by the track-maintenance forces of this road. Since the trucks carry with them at all times practically all equipment needed by the gangs they are, in effect, mobile toolhouses.

STEEL DOORS to motor-car compartment have been opened preparatory to unloading the car.

Coincident with the introduction of the special trucks the maintenance of way set-up of the TP&W was completely reorganized along unusual lines. The revised organization comprises two types of gangs, small motor-car equipped units and larger truck-equipped crews. The two types of gangs have assigned territories in an alternating arrangement (see map), thereby producing a set-up that has unusual flexibility and versatility.

How Force Is Reorganized

Before the present system was put into effect the track-maintenance organization on the TP&W consisted of 16 section gangs equipped with motor cars only. Each gang consisted of a foreman and six men and the sections ranged from 16 to 18 miles in length. When it was necessary to do heavy out-of-face work, or any work requiring a larger force of men, two or three of these section gangs were grouped together. This practice almost always resulted in considerable delays while the individual gangs traveled to the job site. It also involved an expense for non-productive supervision.

The effect of the reorganization has been to reduce the number of track gangs from 16 to 11 — five on each of the road's two divisions and one in the yard at East Peoria, Ill.

However, the number of men regularly employed is about the same.

The key to effective operation of the road's new main-

MOTOR CAR has been pushed onto hydraulically operated tailgate for lowering to ground. Note stops on pipe rails. Channels on tailgate hold motor car in place.

. . . That's "Piggyback" in Reverse

tenance set-up is found in the special trucks furnished the mobile gangs. Each of the 1½-ton trucks has been modified by the road's forces to incorporate a specially designed van-type body which accommodates a six-man motor car, all necessary track tools and power equipment, and seating space for the gang. Each truck has also been equipped with a hydraulic lift tailgate on the outside of which is carried a light-duty push car. The tailgate is used to raise and lower the motor car or push car when it is desired to load or unload either. After the tailgate has been lowered the push car can be released easily by sliding it from the slots.

When not in use the motor car is carried in the forward end of the truck body and is anchored to the truck bed by bolts in order to prevent movement. Seating space for the men is provided in the rear of the truck. As an added safety feature, should the motor car escape its bonds, steel doors separate the motor-car storage area from the seating space.

Compartments for Tools

Arranged around the truck body is a series of compartments for the storage of hand tools. These are accessible only from the outside and are kept locked when not in use. Separate compartments are provided for the storage of an 8-tool Jackson electric-vibratory tamping outfit.

By providing space for all the tools needed by the gang in carrying out normal work, the necessity for removing tools from the truck at the end of each day has been eliminated. Other power equipment—such as bolting machines, adzers, power railsaws and power rail punches—is available for use of the gang but is not permanently assigned. Assignment of these tools is supervised by the roadmaster.

An additional time saver for each truck gang is a portable telephone which enables the foreman to contact the closest operator and obtain a line-up of the day's scheduled train movements while at the work location, thus avoiding delay in obtaining this information before proceeding to the job.

Unusual Territorial Set-Up

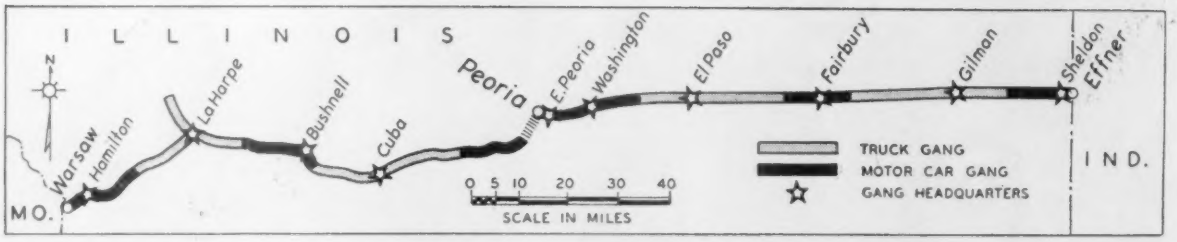
Another factor adding to the versatility and effectiveness of the new track-maintenance organization is the unusual distribution of assigned territories between the mobile gangs and section gangs. At present two of the mobile gangs are assigned to each division with territories ranging from 32 to 34½ miles, depending upon the general condition of the track. They are supplemented on each division by three smaller motor-car-equipped section gangs with shorter territories alternating with those of the truck gangs.

Generally, the full labor complement on each truck gang consists of a foreman and 10 laborers, with one of the men doubling as truck driver.

The smaller section gangs are each composed of a foreman and six men. During the winter it is usually the practice to reduce these gangs to seven and four men, respectively.

Gangs Supplement Each Other

By alternating the territories of the mobile gangs with those of the section gangs, the road's management felt that greater flexibility and economy would be obtained over the practice of having an organization composed entirely of truck gangs. It was reasoned that some phases of track-maintenance work would not require the larger labor force in the mobile gangs, while, on the



ALTERNATING territories of the truck and motor-car gangs are shown by this map of the TP&W.

other hand, many jobs would demand this larger force. By alternating the territories of these two types of gangs, whenever the smaller section crews need assistance they can call upon a neighboring truck gang with its larger force.

In like manner, if the truck gang encounters a situation that is not of sufficient magnitude to utilize the entire force economically it can call upon one of the smaller neighboring gangs. This practice in no way alleviates a gang's responsibility to its assigned territory. It does mean, however, that individual crews are responsible for all work performed away from their assigned territories.

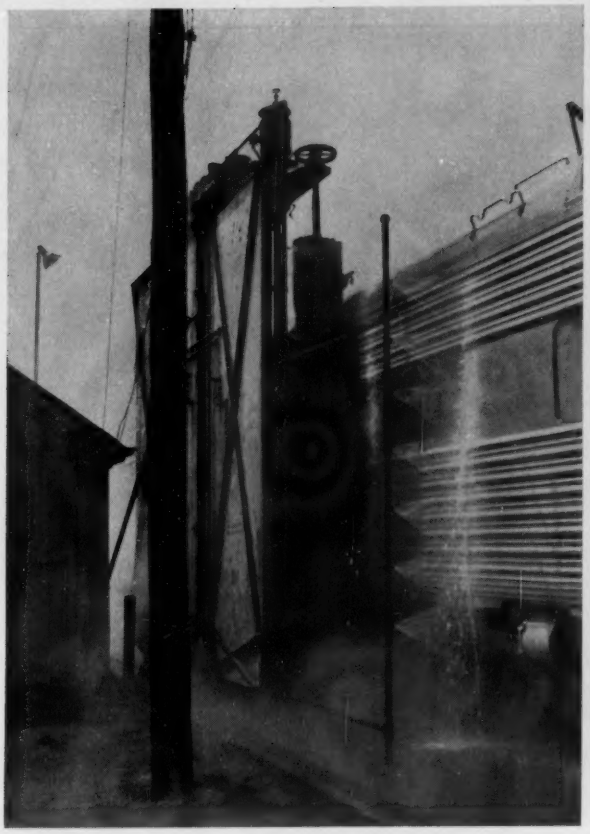
Track inspection work under the new set-up is largely the responsibility of six track patrolmen who keep the individual foremen advised as to what work is needed. The track patrolmen also give a copy of their daily reports to the roadmaster for his information. In addition, each gang foreman is required to make at least one inspection trip over his assigned territory each week. By so doing, he is constantly aware of the general condition of his track and plans his work accordingly.

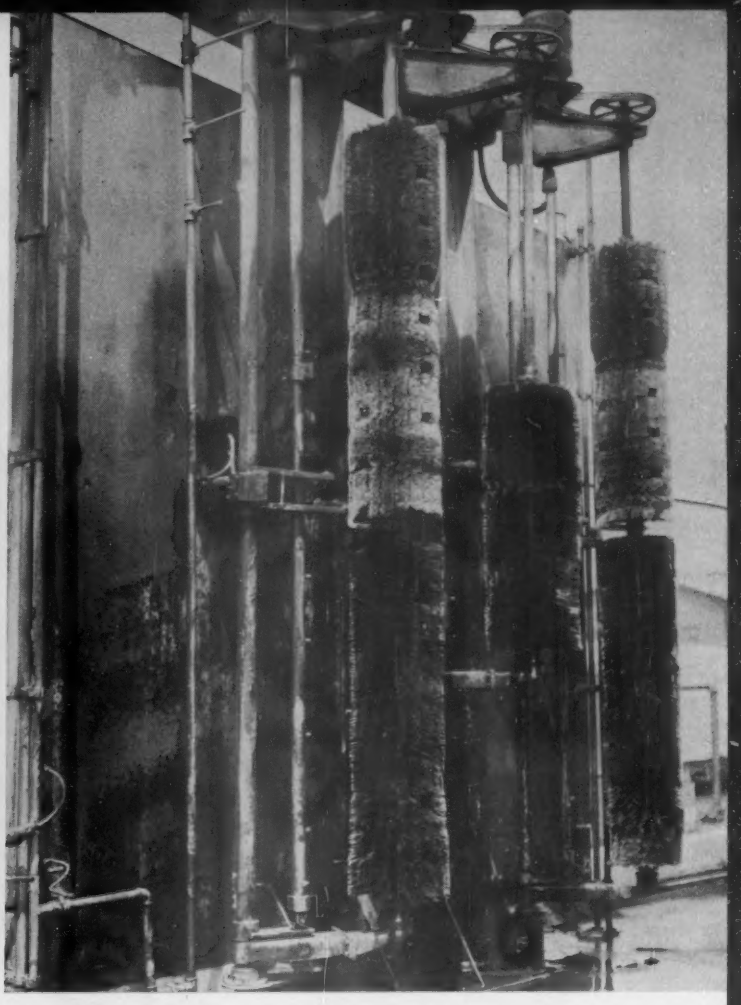
For the most part, the TP&W is paralleled by paved highways. Also, graveled, all-weather roads across the track at approximately one-mile intervals, thus providing easy access to the right of way. To reduce travel time to a minimum the headquarters for each truck gang has been located as near as possible to the center of its assigned territory. Usually not more than twenty minutes is consumed in traveling to work. If the job site can't be reached with the truck, the motor car and push car are placed on the track with the necessary tools at a nearby road crossing and the gang proceeds the rest of the way to the job by rail.

Procedure Produces Savings

The last year in which an all-section-gang maintenance organization was in effect was 1952. By 1955, the revamping of the maintenance-of-way set-up had been completed. These years form a basis of comparison between the old and the new methods, as approximately equal amounts of work were accomplished during the two periods. Even though the same labor force was employed, the overall maintenance-of-way expenditures in 1955 were 20 per cent under 1952 in spite of substantial increases in unit costs for labor and materials. R. H. Egbert, chief engineer of the TP&W, attributes this saving to the special trucks and the alternating arrangement of the section and truck-gang territories.

TOOL COMPARTMENTS are provided in sides of van-type body. Truck also carries 8-tool vibratory tamping outfit.





EIGHT TIMES the life, equal cleaning qualities were indicated for nylon bristles in test installation (above left) with fiber brushes. Nylon brushes, lower pair and one in center (above right), wore far more evenly.

High-Price Brushes Pay Off

A little over two years ago the Rock Island began using nylon Tynex bristles on car washer brushes at its Chicago shops. Results to date indicate that this brush, although it costs five times as much as the usual Tampico fiber, will last at least eight times as long, thus cutting the long-term brush cost and reducing out-of-service time of the car washer.

The effect of the nylon bristles on the paint on the cars has been watched carefully to make sure that the tough nylon fibers did not harm the paint. To date there is no evidence that the nylon is any harder on the paint job than the Tampico fibers. The consensus is that the nylon does a wash job equal to that of the Tampico.

The only disadvantage of the brush made with the nylon fiber is, in fact, a consequence of its long life. The galvanized steel back strip—which was satisfactory for the life of the Tampico fiber—corroded and fell out after two-year's service. Stainless steel is now used for the back strips and no further difficulty is expected.

The comparative test between the nylon and the Tampico fiber was started in February 1953. The nylon fiber was installed on 21 pairs of plastic cores (the two lower and one center brush on one side) while the Tampico fiber was installed on the remaining 51 pairs (the other two brushes on the one side and all five on the opposite side). After approximately a year's service, the Tampico fibers showed wear between 1¼ and 1½ in., generally, with greater wear opposite such uneven surfaces as around the windows. The nylon had worn between ¼ and ⅜ in. after one year, and a maximum of ¾ in. after two years.

These results developed with average usage on 75-100 cars and 20 diesel units a day.

Cost records were kept on the installation of both types of fibers. Labor on the 72 installations averaged $2.11 per pair of cores to remove the core from the washer, remove the inserts, reapply the inserts and reinstall the cores in the washer.

Cost of the inserts for one brush set was $786.96 for the Tampico and $4,749.60 for the nylon. Total cost for labor and materials per set of inserts was $938.86 for the Tampico and $4,901.50 for the nylon. Life of the nylon fibers is estimated to be at least eight times that of the Tampico fibers.

The trade name Tynax has been coupled with the word nylon as the latter has now become a generic term and the Tynex distinguishes the American product from the imported.

Why SNCF Is Holding Its Own

The government-owned railroad of France is headed by M. Louis Armand, a man of many talents—Despite political regulation and other problems, M. Armand and the SNCF have kept pace with highway competitors

By ROBERT E. FARRELL

Ten years ago the French railway system limped out of World War II in a state of physical collapse. Some 4,000 miles of track out of a 25,000-mile network had been destroyed, most of the damage hitting lines in the industrial Northeast; 28 per cent of its bridges were knocked out; 60 per cent of its freight yards and repair shops were in ruins; and hundreds of passenger stations were mere mounds of rubble. In all, the liberation years 1944-45 cost the French rail system over $1 billion.

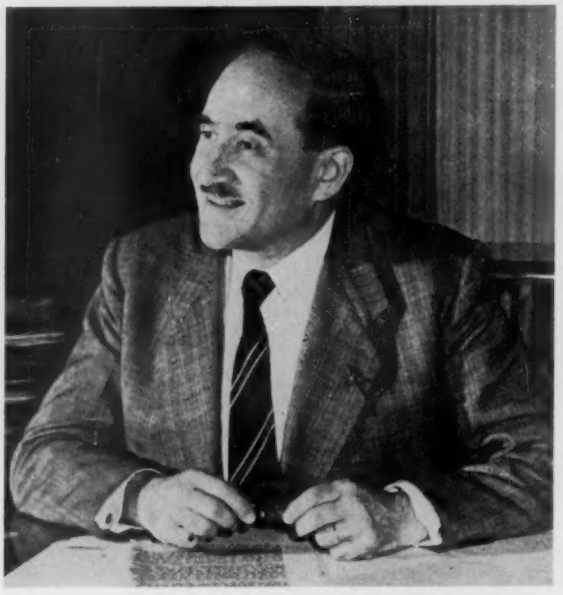
Today, after a decade of reconstruction, the men who run the government-owned Société Nationale des Chemins de Fer (SNCF) can justly claim they operate one of Europe's most modern and efficient rail systems. To get some of the facts behind this reconstruction job, plus an insight into SNCF's current problems, *Railway Age* recently interviewed in Paris the line's president, 50-year-old Louis Armand, who in February 1955 moved up from his former post as SNCF director-general.

"Our investment program since the war," M. Armand explains, "has been dominated by the considerable financial resources needed to reconstruct the system. Initially it was a question of huge expenditures and the national government agreed to meet them. However, the funds it has paid are less than SNCF is theoretically entitled to under war damage laws. This is because the government pays only for the rebuilding of old installations and not for those that were destroyed but won't be rebuilt."

Actually, M. Armand notes, the government meets only 80 per cent of reconstruction expenses connected with rebuilding fixed installations and 90 per cent of expenses relative to rolling stock. The balance is handled by SNCF through bank borrowings or public offerings.

"I should add that most of the funds raised by SNCF for reconstruction work haven't been used to rebuild installations identical to those destroyed. Instead we've invested in more modern equipment to meet new economic needs. On the whole the reconstruction program has contributed to an amelioration of service and a reduction in operating expenses."

Incidentally, this reconstruction program is still going on. By 1948 approximately two-thirds of SNCF's fixed installations had been rebuilt. After that year reconstruction rhythm slowed down as government credits fell off.



PRESIDENT of the 25,000-mile French railway system is 50-year old Louis Armand. M. Armand sees modernization of rolling stock as the key element in the huge rebuilding job the SNCF has undertaken in recent years.

It is estimated the program will take several more years, perhaps until 1960, and some $50-$100 million, before final completion.

Of nearly $1 billion spent so far on reconstruction work, M. Armand figures an equal amount has been invested in fixed installations and rolling equipment. "Nevertheless," he emphasizes, "the principal effort in our modernization plans has been directed toward rolling stock. This has been our guiding principle."

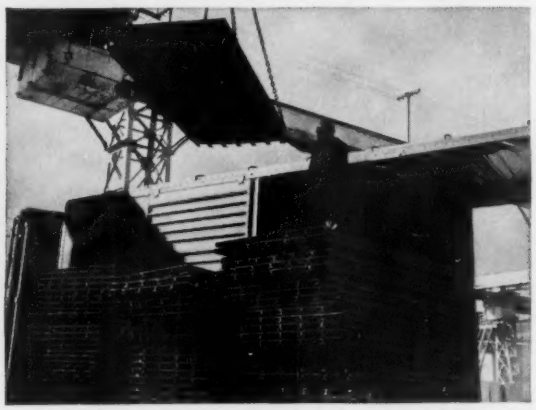
SNCF hasn't placed an order for a steam locomotive since 1945. Its equipment of this type has dropped to 6,000, compared with 17,000 before the war. Electric units—which numbered about 1,200 in 1939—have increased by 300, with another 100 on order. Diesel locomotives, used mainly in the yards, total 200 as against none in the prewar period. An additional 70 are on order. Diesel railcars stand at 900, a postwar increase of 175, with another 70 or so on order. Interestingly enough, the addition of modern passenger cars (nearly 800 have been put in service since the war) and several thousand freight cars of new design has enabled SNCF

(*Continued on page* 48)

Robert E. Farrell, now living in Paris, is a former transportation writer for the Wall Street Journal. Working in Washington, D. C., in 1950-53, his assignment included daily coverage of the ICC. His work there was rewarded with one of journalism's outstanding awards, a Nieman Fellowship providing a year of special study at Harvard University.

Installing N-S-F in a new boxcar at ACF Industries, St. Louis.

N-S-F* helps



Panels of N-S-F awaiting installation in a new boxcar. This car is part of a large order recently filled by ACF Industries.

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Why SNCF Is Holding Its Own

(*Continued from page* 46)

to chalk up better results with less equipment. Its passenger fleet is 44 per cent below 1939 levels while its "park" of freight cars is down 22 per cent; even so, passenger traffic is up 20 per cent from '39 while freight traffic has leaped by nearly 60 per cent.

Since much of SNCF's modernization program entails new installations rather than reconstruction of destroyed equipment, the total cost must be managed without direct aid from the national treasury. M. Armand has a set financial formula for this:

"Twenty per cent of the cost is borne by the system out of operating funds. The rest is raised in the money market."

Rates—Some Headway

Since the war SNCF has rolled at a fast clip in streamlining its equipment and service, but like most railroads the world over its achievements in bringing rate schedules in line with costs have been made at a slow pace.

"The government," M. Armand complains, "prefers to maintain a system of tariffs based on economic aid rather than on competitive realities. All the railroad's efforts in this field, by contrast, have aimed at replacing the old *ad valorem* tariffs, which perhaps were valid in a period of monopoly, with a tariff structure based as nearly as possible on cost of transport. When railroads first assumed their present-day obligations they were a monopoly in fact as well as law. Today the facts deny the law—yet the old obligations remain. We must accept traffic that our competitors turn away as unprofitable. We are obliged to do these things, but because we are considered to be a public service, we often are denied the right to levy an economic tariff."

In France there is no equivalent of the Interstate Commerce Commission. New rate demands must be ratified by a government ministry which by tradition often regards SNCF as a political or social instrument.

"In our country," M. Armand elaborates, "the state was completely developed by the time the railroads made their appearance. The government already had evolved a transportation policy which in general can be described as one of economic aid to the regions served. This policy was applied to rail tariffs as well and is still the dominant policy today, particularly now that the government wants to encourage economic decentralization."

Yet since the war SNCF has managed to push through some revision in its freight rates. For example, in 1948 rates were revised to take into consideration load characteristics. Another revision, in 1951, gave more weight to the real cost of transport for each commodity. Finally, in 1953, an increase was granted on LCL rates.

SNCF Efficiency Record

	1938	1948	1955 (estd.)
Annual freight car ton-kilometers	56,000	96,000	123,000
Average carload, in metric tons	9	12	15
Daily locomotive run, in kilometers			
Steam	75	85	108
Electric	180	220	260
Energy consumption, in calories, to transport a ton-kilometer	400	389	260

The French National Railways moved an estimated 67.6% of that nation's intercity ton-kilometers (or ton-miles) in 1953. While this was slightly below the 1949-52 level, it remained above the representative prewar figure of 65.9% in 1938. Compared with U.S. railroads over the same period, the SNCF has been substantially more successful in holding its position in the total transportation scheme.

Water carriers lost position in France between 1938 and 1953. Their share of total traffic dropped from 20.6 to 13.1%. Privately owned truck companies fared better. They increased their share of intercity business from 13.5 to 19.3% in the 15-year period.

A recent book, "La Situation Financière de la SNCF," by Professor Paul Coulbois of the University of Strasburg, contains figures showing the distribution of traffic between France's three basic forms of transportation. This chart shows the trend:*

HOW TRAFFIC IS DIVIDED AMONG CARRIERS

(Figures are percentage of total)

	1938	1949	1950	1951	1952	1953
Railroad	65.9	74	71	71.6	70.7	67.6
Water	20.6	10.8	12.2	11.8	12.4	13.1
Highway	13.5	15.2	16.8	16.6	16.9	19.3

*An article summarizing the findings set forth in this book appeared in *Railway Age*, Jan. 30, p. 32.

A Deficit, and Why

"Our proposal," M. Armand says, "hasn't won government approval because it runs counter to the government's present policy of economic decentralization. But fortunately the several tariff reforms that were granted have enabled us to make some real gains. Our customers are taking advantage of these reforms and thus the average freight car load is now around 15 tons. The reforms have helped our competitive position somewhat but it would be premature to say we've finally reversed the trend. True, our freight business this year is well above '54 levels whereas for the past seven years (1951 excepted) our share of the traffic had been falling off. This year we estimate volume will be up some 20 per cent while receipts should show an increase of ten per cent. But it is equally true that road haulage also has enjoyed similar gains."

On the passenger side of SNCF's operation, the government last fall approved the company's proposal to do away with the three-fare system. Third class fare will remain intact, second class will be eliminated, while seats in a "superior" class will be sold at a tariff somewhat below the old first class fare. It is expected all European roads will make a similar revision.

Turning to the problem of SNCF's ever-rising deficit, M. Armand puts the blame on three basic factors.

First, there is the uneconomic rate structure which

(*Continued on page* 50)

How to take booming costs out of the piggy-back boom

HERE'S THE PROBLEM: **Growing trailer-on-flat-car traffic has brought disproportionate, profit-eating increases in terminal costs. (For a full discussion, read *Railway Age*, Dec. 5, 1955, page 54.)**

HERE'S HOW "GUIDED LOADING" SOLVES IT

"Guided Loading" and tie-down time is 1/6 to 1/4 that of conventional loading. Thus it is possible to postpone loading until near-departure time; you can pre-switch trailers on the ground according to destination. Car-switching is eliminated. Manpower is drastically cut; terminal investment is held to a minimum. You need fewer ramps and no lift trucks.

THE PIGGY-BACK, Inc., car is essentially just a skeleton—a center sill on standard trucks that provides a continuous track for "guided loading." Rollers attached to trailer and tractor axles engage this track, thus permitting fast handling. Tires and bearings are free. Trailers ride 8" lower. One man from the ground secures the trailer in a matter of seconds. Rubber-snubbed clamps allow 10" shock-absorbing travel in each direction. The result: (1) low cost—light weight car, (2) Maximum clearance, (3) Quick loading and unloadings, (4) Maximum shock protection, (5) Low operating and maintenance costs.

In-service tests show astounding savings in time and costs offered by "guided loading." For example: Conventionally, 96 minutes and 6 men were required to load and tie-down 16 trailers on an eight-car cut. "Guided loading" does the job in 24 minutes with only one man.

Eight-hundred fifty Piggy-Back, Inc. "guided loading" cars will soon be serving four major railroads. Don't take another step toward t-o-f-c without getting every proved fact about "guided loading." This AAR and ICC-approved equipment has been tested from coast to coast.

PIGGY-BACK, Inc.

70 PINE STREET
NEW YORK 5, N. Y.

Why SNCF Is Holding Its Own

(*Continued from page* 43)

stems from an outmoded definition of the railroad's role in a modern industrial society. Public service charges "hit us very heavily," the SNCF president states. But, he adds, the trouble extends beyond suburban and secondary lines, "for often we must publish equal tariffs throughout the system with the result that on well-equipped lines a tariff is too high to meet competition while on another portion of the system the same tariff doesn't come near to covering costs. As I've said, the government prefers a tariff structure of this type rather than one based on the competitive or cost situation."

A 1,800-TON "MINERAL" TRAIN rolling over SNCF's newly electrified section in Northeastern France. The system uses a-c current at 25,000 volts, 50 cycles, which accounts for light overhead wiring. Engine shown is one of two types designed for heavy coal and coke traffic. One operates directly on a-c; the other, equipped with d-c motors, makes the conversion within the unit iself. Bo.h can haul loads up to 1,400 tons at 75 mph.

government prefers a tariff structure of this type rather than one based on the competitive or cost situation."

The second factor contributing to the deficit is SNCF's steep social security bill, particularly pension costs. "SNCF must obey government directives in these matters, and while we have to add them to our operating costs they shouldn't be charged against our efficiency." The road's pension bill last year totaled $225 million. Retirement age on the SNCF is 55; as a result, the company pays pensions to some 386,000 retired employees while its active work force is only 381,000.

The third deficit element, according to M. Armand, is the deterioration of the postwar franc. Only in the past few years has the value of the franc remained relatively stable. In all, there have been five postwar devaluations which have complicated the line's deficit problem.

"Despite the deficit," M. Armand insists, "it's no secret that SNCF presently is run more economically than before the war. However, the very considerable profits resulting from a more efficient operation haven't been used by the government to ameliorate our accounting books. Instead, these financial gains have been used to maintain or develop a social policy—like high pensions—or to further the state's economic aid projects. In such a situation the best way to judge our progress is to look at the record in terms of productivity of men and material."

M. Armand has no doubt that the only solution to his system's deficit problem and to the present anarchy in French transportation service is a coordination plan.

"The government knows this, too, and recently a committee was set up to study the problem." The SNCF president hopes the committee will throw some much-needed light on a situation familiar to U.S. railroads: the hidden cost items of competing services, which the taxpayer pays. "The government," M. Armand says, "bears the cost of building roads, repairing them and policing them. It ought to dig up the facts that will show the real cost of transportation among the various competitive systems."

Electrification Increases

Despite headline-grabbing stunts such as radio-controlled and 200-mile-an-hour trains, M. Armand thinks 1955 will be better remembered as the year SNCF electrified its important Northeast lines (a move long postponed by military considerations). While the Northeast portion of the system serves only one-fifth of the country it yields 40 per cent of the freight receipts and some two-thirds of total tonnage. The first section of the project—stretching 280 kilometers along the Franco-German border—was opened recently between Valenciennes and Thionville, thus hooking up the industrial areas of the North with those of Lorraine. Unlike other portions of its network, where d-c (1,500 volts) is in use, SNCF in the Northeast is using a new system of alternating current of 50 cycles at 25,000 volts. The Valenciennes-Thionville line, over which some of the heaviest traffic (coal and coke) in Europe rolls, marks the first use for such a task of a-c in western Europe.

M. Armand, who launched the project in 1952, says the new system reduces the number of fixed installations

(*Continued on page* 54)

This machine for excavating intertrack ballast is only one of the many different types of track maintenance equipment lubricated with ESSO MULTI-PURPOSE GREASE.

One grease for many uses—
ESSO MULTI-PURPOSE GREASE simplifies maintenance

For all types of maintenance-of-way equipment . . . ESSO MULTI-PURPOSE GREASE. It is an ideal lubricant for such diverse equipment as ballast cleaners, tampers, cribbers, screeners and many other pieces of machinery, including automotive and construction equipment. The use of *one* grease instead of many is more efficient, more economical. Because of these benefits, more and more railroads have come to use and depend on ESSO MULTI-PURPOSE GREASE.

THREE IMPORTANT ADVANTAGES back the use of ESSO MULTI-PURPOSE GREASE:

1. Outstanding in quality, it has been proved on the road and in the lab in a multitude of applications. Meeting the rigid requirements for automotive wheel bearings, it performs equally well in applications requiring a general purpose grease.
2. ONE grease performs in many applications, eliminating the need for a variety of greases. It prevents the application of the wrong grease and possible damage to machinery.
3. Storage and handling problems are reduced to a minimum, resulting in greater economy. It is easier to protect a single container of ESSO MULTI-PURPOSE GREASE against contamination than several partially empty special-purpose drums.

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Green Bay & Western Railroad saves time and

Green Bay & Western Railroad, well known for its fast freight service across the state of Wisconsin, is now using Bell System private line telephone for communications between 26 stations in 17 different cities.

Is this service paying off? Let the people who use this service tell you about it.

"INSURES COMMUNICATIONS WITH ALL STATIONS"

says Chief Dispatcher B. D. Curran

"We use our private line service for car distribution, message work and emergency dispatch. During such operations, we can wear the headset continuously so that in effect we have a telephone conference with no signalling or ringing required. We can give the morning line-up of train operations by calling in all stations at the same time. The line insures communications with all stations."

"MONTHLY COST WAS REPAID IN ONE NIGHT"

says Superintendent L. J. Knutson

"In cases of service interruption, rerouting of trains and emergency equipment used to be time-consuming. With our private line telephone, the situation has vastly improved. Now all of those engaged in the emergency operation maintain continuous contact with each other. In one serious washout recently, we feel that the monthly cost of the service was repaid in one night's operation."

We'll be glad to work with you to show how private line communications can save time, cut costs, improve service. Your special needs will get careful attention. There's no obligation. Call your Bell Telephone representative.

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money with new private line telephone service

OWNING vs. *LEASING*

When you buy and own your own equipment, you tie up money that could otherwise be used to expand your business. And your costs of operation may vary widely from month to month for such things as maintenance, training, depreciation, taxes, etc.

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"WE TALK UNTIL ALL QUESTIONS ARE SETTLED"

says Superintendent of Locomotives A. S. Johnson

"When locomotives develop trouble away from terminals, we used to make trips of over 100 miles to restore service. Now with the private line service, most of these trips are unnecessary. Train crews call from the nearest station to describe the trouble. We can usually specify proper repair procedure over the phone. The important thing is: Everybody stays on the line until all questions are settled."

"SPEEDS SHIPMENTS"

says Chief Clerk and Traffic Representative L. C. Gaffney

"We use the line to trace shipments. This is more demanding than ever today because industries are tending to reduce inventories and depend on closely scheduled shipments for production lines. The circuit also aids on-line agents in the rating of shipments. We must move shipments without delay and furnish information rapidly to shippers. This private line service certainly speeds shipments."

Bell Telephone System

TELEPHONE • TELETYPEWRITER • TELEMETERING AND REMOTE CONTROL CHANNELS

Why SNCF Is Holding Its Own

(Continued from page 50)

needed. Substations are spaced at 70 kilometer intervals on the a-c line versus 13 kilometers on a comparable d-c line. Overhead wiring also is much lighter. The SNCF president refers to the system as "the heaviest trains under the lightest wiring."

Future Problems

M. Armand has no misgivings about the future role of railroads, though he thinks much has to be done to "reorganize old methods to meet new demands." The railroad industry, he asserts, "has only begun to realize the benefits of organization." By organizing and introducing new shipping methods the rails can in time answer the "portal-to-portal" challenge of truckers.

At present, 40 per cent of tonnage hauled by SNCF is picked up and dropped off at private sidings. The company has developed a wide range of "piggyback" operations. "Piggyback" truck operations since 1949 have risen from 100,000 tons annually to about a half million. With services of this type, M. Armand insists, railroads can recapture much of their lost ground.

Ideas are M. Armand's *forte* and he is today regarded in European circles as one of his country's outstanding industrial personalities. A graduate of the famous *Ecole Polytechnique*, M. Armand quickly made a name in mining and railroad fields. Besides his SNCF activities, he is often tapped for jobs dealing with European atomic energy problems. As a railroader perhaps M. Armand's most enjoyable extracurricular activity concerns his presidency of the International Union of Railroads, an important group of some 32 roads which constitutes a driving force in the task of uniting Europe industrially. Just recently one of M. Armand's pet projects within this group was adopted. This was the creation of a joint-financing company—Eurofima—for the purchase of common equipment.

Headquarters at Basel, Switzerland, the new company has a capital of 50 million Swiss francs with SNCF and the West German railroad—Bundesbahn—as the principal stockholders. But the problems of rate fixing between European nations, M. Armand predicts, will prove a more difficult nut to crack.

"We need an ICC for Europe," he exclaims, and then ponders: "But then how are we to turn over authority to an international body when this authority doesn't even exist in each individual country?"

Here's a Rubber-Tired Switcher

Taking over some of the Pennsylvania's switching work in Jersey City, N. J., this week is a compact new four-wheel unit dubbed the "Switchmobile." Weighing under 36,000 lb, the vehicle is 10 ft, 3 in. wide and only slightly longer than a standard passenger automobile.

Chief asset of the "Switchmobile" is its ability to short-cut across city streets between industrial plants, thus reducing lost time between switching assignments.

Power for the vehicle is provided by a 208-hp diesel engine. The all-wheel-drive machine develops approximately 30,000 lb of rimpull—enough to move more than 1,000 tons from a standing start.

Rubber tires (18 by 25, low pressure) permit the "Switchmobile" to be operated across tracks without damage to signal equipment, switches, ties or rails. Wheel gage of 8 ft, 4½ in. is intended to allow the unit to straddle rails and run on the ties.

A special four-speed transmission has the same gear ratios forward or backward. Operating controls inside the cab are mounted on an arm that swings laterally from a pedestal. Bucket seats face in each direction on opposite sides of the cab, and the control panel will swing into position before either seat.

The "Switchmobile" is equipped with standard Type E couplers and air brake lines both front and rear. Couplers are mounted on sliding tracks and can be positioned to the right or left as required.

The unit's cab is mounted in the center of the machine and all-around windows eliminate blind spots for the operator.

Built by LeTourneau-Westinghouse Company, the first "Switchmobile" was custom made for the PRR. The manufacturer now plans to make it a standard production machine.

THIS RUBBER-TIRED vehicle will handle switching at one plant, then roll over city streets to its next assignment.

Biggest reason for using only Caterpillar original parts in your machine is a reason you cannot see or feel. It is the *ancestry* of Caterpillar parts.

Behind each and every CAT* replacement part is the experienced engineering, painstaking research, grueling testing, skilled manufacturing and rigid inspecting which make Caterpillar products the standard of the industry. With these truly "pedigreed" parts you can be sure of better all-around performance, less down time.

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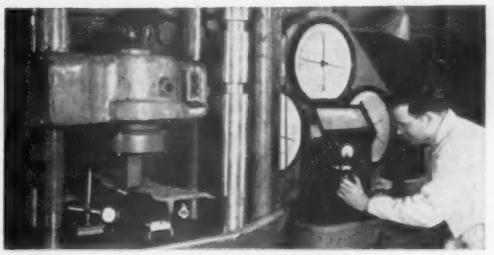
And remember, your Caterpillar Dealer will carry your inventory of Cat original parts. Ask his Parts Representative about it.

Caterpillar Tractor Co., Peoria, Illinois, U. S. A.



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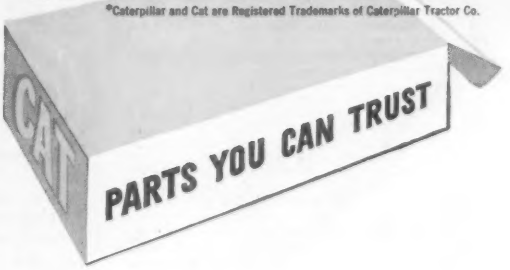


Financial

(Continued from page 16)

KANSAS CITY SOUTHERN.—common, 75¢; extra, 25¢; both payable March 15 to holders of record February 29; 4% preferred, 50¢, quarterly, payable April 16 to holders of record March 30.

NORTH CAROLINA.—7% guaranteed, $3.50, semiannual, payable August 1 to holders of record July 21.

NORTHERN PACIFIC.—90¢, payable April 26 to holders of record April 5.

PEORIA & EASTERN.—$2.50, payable April 2 to holders of record March 12.

PITTSBURGH, FORT WAYNE & CHICAGO.—common, $1.75, quarterly; 7% preferred, $1.75, quarterly; both payable April 2 to holders of record March 9.

SOUTHERN PACIFIC.—75¢ quarterly, payable March 19 to holders of record February 27.

UNION PACIFIC.—common, $1.50, increased, payable April 2 to holders of record March 5.

VICKSBURG, SHREVEPORT & PACIFIC.—common, $2.50, semiannual; 5% preferred, $2.50 semiannual; both payable April 2 to holders of record March 2.

WABASH.—4½% preferred, $4.50, annual, payable April 20 to holders of record March 30.

Applications

BOSTON & MAINE.—To issue $7,230,000 of equipment trust certificates, the first installment of a proposed $18,510,000 issue, the whole of which would finance in part the acquisition of equipment (listed below) expected to cost a total of $23,151,130.

	Description and Builder	Estimated Unit Cost
1,000	steel box cars, 50 ft. 6 in. long (Pullman-Standard Car Manufacturing Company)	$ 8,816
539	steel box cars, 40 ft. 6 in. long (Pullman-Standard)	8,635
35	steel box cars, 40 ft. 6 in. long and insulated (Pullman-Standard)	20,100
300	70-ton hopper cars (Pullman-Standard)	8,860
26	70-ton covered hopper cars (Pullman-Standard)	9,100
90	steel general-purpose flat cars with nailable steel floors (Pullman-Standard)	9,936
10	steel bulkhead-type flat cars with wood floors (Pullman-Standard)	10,269
30	lightweight, stainless steel, 94-passenger coaches (The Budd Company)	146,834
2	lightweight, stainless steel, 89-passenger coaches (Budd)	170,800
2	lightweight, stainless steel coach-baggage cars (Budd)	169,600

The certificates would mature in 15 annual installments of $482,000 each, beginning March 1, 1957. They would be sold by competitive bids which would fix the interest rate.

CHICAGO & NORTH WESTERN.—To assume liability for $3,900,000 of equipment trust certificates, the third installment of a proposed $11,700,000 issue, the whole of which would finance in part the acquisition of 2,075 freight cars (*Railway Age*, September 26, 1955, page 43). The certificates, dated November 1, 1955, would mature in 15 annual installments of $260,000 each, beginning next November 1. They would be sold by competitive bids which would fix the interest rate.

ILLINOIS CENTRAL.—To assume liability for $9,900,000 of equipment trust certificates to finance construction of 2,000 steel box cars in its own shops, at an estimated unit cost of $6,600 and an estimated total cost of $13,200,000. The certificates, dated March 1, would mature in 30 semiannual installments of $330,000 each, beginning September 1. They would be sold by competitive bids which would fix the interest rate.

LOUISVILLE & NASHVILLE.—To assume liability for $3,645,000 of equipment trust certificates to finance in part the purchase, from Alco Products, Inc., of 28 diesel-electric locomotive units, including: 14 1,600-hp. "A" units at an estimated unit cost of $171,747; 2 1,600-hp. "B" units at $157,362; and 12 1,600-hp. road switchers at $153,459. The certificates would mature in 15 annual installments of $243,000 each, beginning March 15, 1957. They would be sold by competitive bids which would fix the interest rate.

MISSOURI-KANSAS-TEXAS.—To issue $33,350,250 of prior lien mortgage, 4½% bonds $33,350,250 of convertible, 5% income debenture bonds, and $33,350,250 of certificates constituting a charge on income. The bonds and certificates would be offered in exchange for the Katy's 667,005 shares of series A preferred stock and unpaid dividends thereon. Fifty dollars of each issue of the bonds and a like amount of the certificates would be offered for each share of preferred, but the offer would become effective only if accepted by holders of at least 25% of the preferred. The prior lien bonds would mature January 1, 1991, while the convertibles would mature January 1, 2006. Both would have sinking-fund provisions.

NEW YORK, NEW HAVEN & HARTFORD.—To issue $3,458,965 of its Series A general mortgage income bonds and to modify outstanding bonds of the same series. The modifications would eliminate the conversion privilege, so bonds of the series would no longer be convertible into preferred stock, and ease the indenture's sinking fund requirements which are "unduly burdensome." Also, it is proposed to raise the principal of the outstanding bonds by $5 per $100, increase the interest rate from 4½% to 5%, and add 75 cents to the 1955 interest payment per $100, thus making it $5.25. Bonds of the series now issued total $69,179,300, of which $52,755,500 are in the hands of the public and $16,423,800 in the NH treasury. The series is dated July 1, 1947, and its maturity date is July 1, 2022.

Harding Presents Pullman Company Safety Awards

Pullman President's Safety Trophies were presented to H. A. Hudwalker (left) regional manager of Pullman's Southwestern region, and H. E. Mounday (center), manager of Pullman's Richmond, Cal. shops by Carroll R. Harding, Pullman's president, at a recent Chicago luncheon. The Richmond shop completed the year 1955 without a chargeable accident. The Southwestern region had a record of 2.74 accidents per million man hours worked, lowest record for any Pullman operating region.

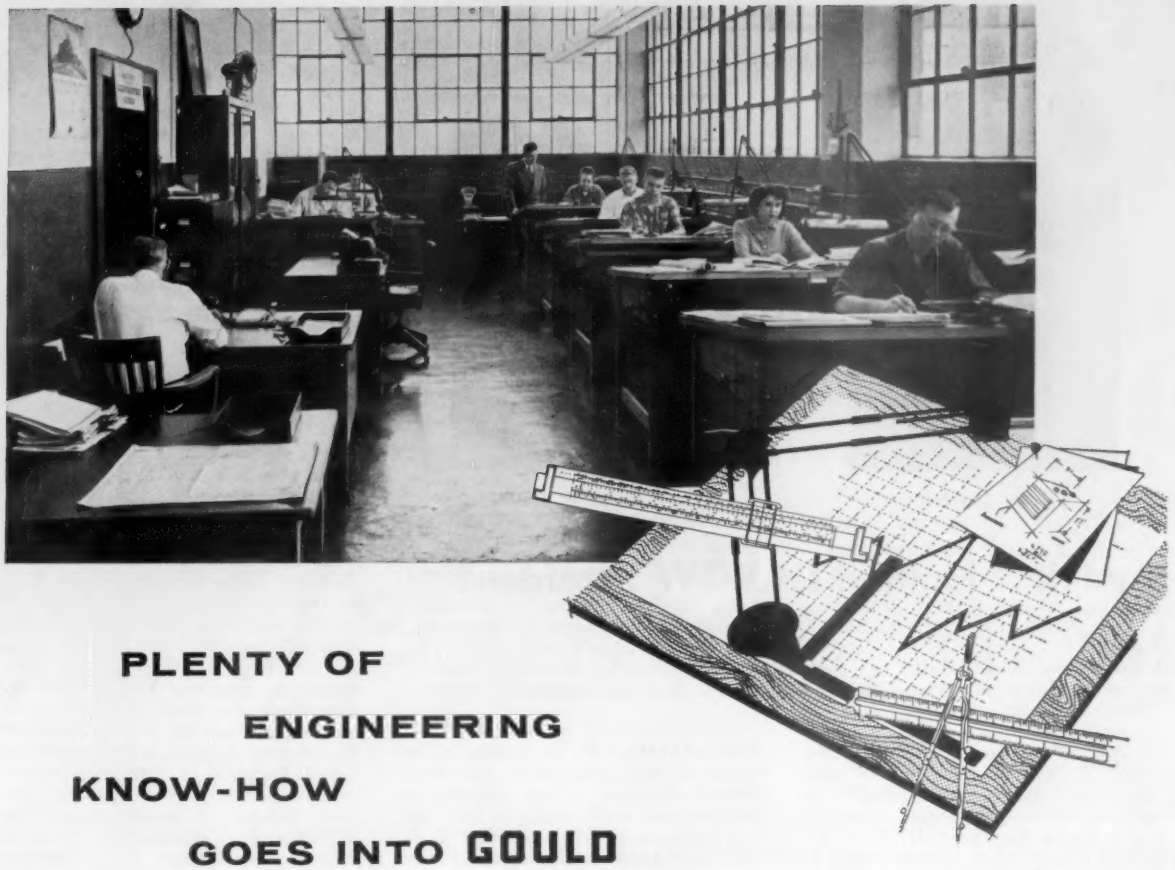
Organizations

The 10th National Conference on Handling Perishable Agricultural Commodities will be held at Purdue University, Lafayette, Ind., March 12-16. It is sponsored by the university, the **Association of American Railroads,** and the **American Railway Development Association,** in cooperation with several railroad freight bureaus and inspection agencies, and the U.S. Department of Agriculture. The program calls for discussion and demonstration of new methods and practices to reduce loss and damage involved in handling fruits and vegetables. G. A. Lirley, agricultural agent, Illinois Central, is conference chairman.

Newly elected officers of the **Transportation Club of Peoria** are: President, Keith Hopkins ,traffic manager, Caterpillar Tractor Company; first vice-president, E. L. Peterson, division freight agent, Rock Island; second vice-president, Keith Cecil, general manager, Central Transfer Company; secretary-treasurer, C. M. Abernathy, assistant to traffic manager, Keystone Steel & Wire Company.

New officers of the **Traffic Club of Kansas City** are: President, L. H. Poettgen; first vice-president, R. L. Rowley; second vice-president, C. B. Smith; secretary-treasurer, A. F. Persels; recording secretary, P. R. Medland.

Eleven new directors were elected to the board of the **Transportation Association of America** at its recent annual meeting. Among them were four railroad presidents—C. McD. Davis, Atlantic Coast Line; Harry A. DeButts, Southern; Clark Hungerford, Frisco; and Alfred E. Perlman, New York Central—and A. H. Schwietert, traffic director, Chicago Association of Commerce and Industry.



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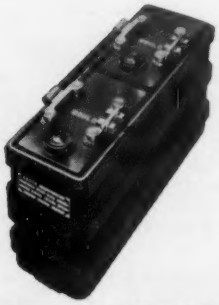

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G. B. Aydelott

Leonard H. Hale

Aydelott Named D&RGW President

G. B. Aydelott, executive vice-president of the Denver & Rio Grande Western since last August, has been named president to succeed the late Wilson McCarthy.

Leonard H. Hale, general superintendent of transportation since January 1, 1955, was appointed to head the road's operating department as vice-president and general manager.

Up From Ranks—"Mr. Aydelott's thorough knowledge of railroading is unquestioned," John Evans, chairman, said last week in announcing the board's selection as president. "Since assuming heavy responsibilities as executive vice-president he has repeatedly demonstrated executive ability and a quick grasp of financial and other problems."

The new president, who is 41 years old, entered D&RGW service less than 20 years ago, starting as a track gang laborer shortly after graduation from the University of Illinois as a transportation student in June 1936.

During the next few years Mr. Aydelott was promoted to assistant extra gang foreman, track inspector, engineering assistant, roadmaster and trainmaster. In 1947 he was appointed assistant to chief mechanical officer, and the following year was named division superintendent.

On October 9, 1954, Mr. Aydelott was promoted to vice-president and general manager, and on August 22, 1955, he was given additional duties as executive vice-president.

His father, James H. Aydelott, was formerly vice-president of operations and maintenance of the Association of American Railroads.

New Operations Head—Mr. Hale entered railroad service with the Frisco in 1912 and joined the D&RGW in 1918 as a dispatcher.

Named chief dispatcher in 1937, Mr. Hale subsequently served as inspector of transportation, trainmaster, and superintendent. In 1948 he was appointed superintendent of transportation, the post he held until his January 1, 1955, promotion to general superintendent of transportation.

ASSOCIATION OF AMERICAN RAILROADS.—P. D. Jonas, comptroller of the Lackawanna, has been elected chairman of the Accounting Division and concurrently of the General Committee, AAR, succeeding **R. E. DeNeefe** retired. The office of first vice-chairman, previously occupied by Mr. Jonas, will remain vacant until regular elections at the May annual meeting in Los Angeles.

Burton Williams has been appointed assistant chief engineer, Freight Loading & Container Bureau, Freight Loss & Damage Prevention Section, at Chicago. Mr. Williams was formerly loading rules supervisor.

BALTIMORE & OHIO.—R. C. Loomis, division freight agent at Cincinnati, has been named assistant general freight agent at Chicago, succeeding **C. P. Mabie. P. W. Nutley,** district freight agent at New York, has been appointed division freight agent at Indianapolis, succeeding **W. D. Wilbur,** who replaces Mr. Loomis at Cincinnati.

CANADIAN NATIONAL.—Leslie H. Collins, Joseph H. Tilley and **Clifford H. Sparks** have been appointed assistant regional managers in the real estate department of the Central region at Toronto. Western region at Winnipeg, and Atlantic region at Moncton, respectively.

CHICAGO & NORTH WESTERN.—Quentin M. Lambert, publicity manager at Chicago, has resigned to become director of public relations of the Illinois Toll Road Commission.

GREAT NORTHERN.—Effective March 1, **William E. Nicholson,** Western traffic manager at Seattle, has been appointed general freight traffic manager in charge of sales and service at St. Paul, succeeding **Frank J. Conrad,** who has become freight traffic vice-president of the **Rock Island** at Chicago. Mr. Nicholson's successor is **Gerald D. Johnson,** freight traffic manager, sales and service at St. Paul, who has been replaced by **Alfred H. Engelhart,** general freight agent at Seattle. **Hugo H. Knocke,** also general freight agent at Seattle, replaces Mr. Englehart, and in turn has been replaced by **Robert W. West,** general industrial agent of the Spokane, Portland & Seattle at Portland. **Earl C. Warren** and **James J. Woulfe,** general freight agents, have been named assistant freight traffic managers, with headquarters as before at Chicago and San Francisco, respectively.

Frank V. Percival, division superintendent at Spokane, Wash., has retired. The Spokane division has been abolished, the territory being absorbed by the Cascade division to the west and the Kalispell division to the east. Kalispell division headquarters, formerly at Whitefish, Mont., have been moved to Spokane, and **Henry M. Shapleigh** continues as superintendent of the expanded division. **Robert H. Shober,** division superintendent at Grand Forks, N.D., has been named superintendent of the expanded Cascade division at Seattle, succeeding **William P. Coliton.** Mr. Shober's successor is **William J. O'Connor,** trainmaster at Grand Forks. **Thomas J. Brennan** and **Otto E. Fisher,** trainmasters, have been appointed to the newly created positions of assistant superintendents at Wenatchee, Wash., and Whitefish, respectively. **E. L. Conaway,** transportation inspector lines west, has been named safety supervisor at Seattle.

N. M. Balch, Kalispell division roadmaster at Whitefish, has been appointed assistant engineer, maintenance of way at St. Paul, and **Bruce G. Anderson,** office engineer at Seattle, has become principal assistant engineer there.

F. P. Oslund has been appointed auditor equipment service accounts at St. Paul, Minn., succeeding **D. G. Peterson,** retired.

J. E. Walker, general claims agent at St. Paul, has retired, and his successor is **R. W. Plunkett,** assistant general claims agent, who has been given the title of general claims attorney. **J. D. Munson,** district claim agent at Seattle, has been named assistant to the general claims attorney, to replace Mr. Plunkett.

MILWAUKEE.—H. W. Wellenstein, signals and communications supervisor at Aberdeen, S. D., has been transferred to Milwaukee, succeeding **J. M. Ellefson,** retired. **P. G. Ness,** signal maintainer at Montevideo, Minn., replaces Mr. Wellenstein at Aberdeen. **R. W. Ivey,** signal main-

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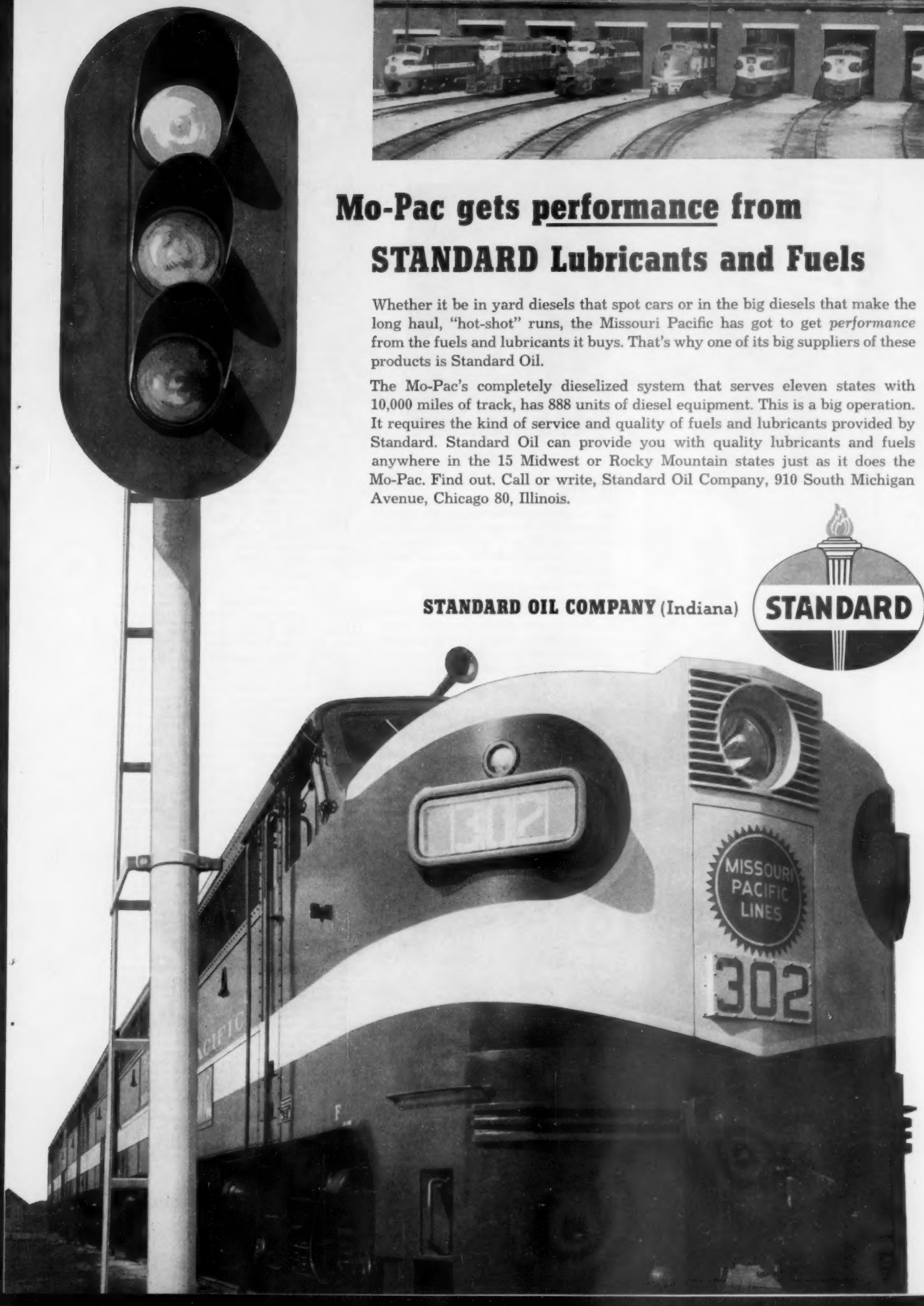

tainer at Manilla, Iowa, has been named supervisor signals and communications, East Iowa division, at Marion, Iowa.

MISSOURI-KANSAS-TEXAS OF TEXAS.—E. E. Deisher, assistant treasurer and paymaster at Dallas,

E. E. Deisher

has been elected treasurer, succeeding **Clyde West,** retired. **R. W. Freeman,** cashier, replaces Mr. Deisher.

Mart W. Reeves, assistant general solicitor at Dallas, has been appointed general attorney. **J. Saunders Freels** succeeds Mr. Reeves as assistant general solicitor.

NEW YORK CENTRAL.—James E. Hawthorne, a transportation executive with experience in trucking, airline and bus operations, has been appointed assistant vice-president of passenger sales.

James E. Hawthorne

Leo B. Fee, former chief examiner of the Association of Western Railways and a carrier member of the National Railroad Adjustment Board, has been named director of labor relations of the NYC. **Joseph D. Boylan,** former American Airlines' director of cargo sales, has been appointed to the newly created post of director of market research.

The following changes have been made: AT CHICAGO—S. W. Bone, from passenger traffic manager, to passenger sales manager; C. E. Defendorf, appointed assistant chief engineer; C. M. Indra, from general agent at Minneapolis to division freight sales manager; David S. Mackie, from freight traffic manager (abolished), to assistant vice-president, freight sales and service; R. F. Martin, appointed assistant division passenger sales manager; T. E. Nerland, from general passenger agent to district passenger sales manager; J. E. Norwood, from assistant to freight traffic manager to perishable freight sales manager; F. H. Simpson, chief engineer at Chicago (abolished) transferred to New York. W. K. Ulrich, from assistant general freight agent to assistant freight sales manager (printer's error in *Railway Age* Feb. 13). **AT MATTOON, ILL.**—F. L. Coverston, assistant superintendent, Big Four, at Springfield, Ohio, to superintendent. **AT PEORIA**—Arthur A. Auchter, appointed division freight sales manager. **AT EVANSVILLE, IND.**—I. J. Bader, appointed district freight sales manager. **AT INDIANAPOLIS**—Ralph A. Barnett, transferred from Peoria as division freight sales manager, succeeding V. M. Ousey, retired; Ralph N. Cramer, appointed assistant district freight sales manager, succeeding Charles A. Hart, retired; L. J. Hennessey, appointed division passenger sales manager; J. D. King, from superintendent at Mattoon, to superintendent of transportation, Southern district. **AT BOSTON**—O. J. Petrie, from assistant general passenger agent to assistant division passenger sales manager; I. G. Rasp, from general passenger agent, to passenger sales manager; Wallace M. Snow, from freight traffic manager to assistant vice-president, sales and service. **AT DETROIT**—C. Fendrych, from general passenger agent, to passenger sales manager; H. B. Goodwin, from assistant to general manager (management services), Michigan Central, to executive assistant; S. H. Lijewski, named superintendent, Detroit division, succeeding W. H. Shearer, appointed to newly created post of superintendent of transportation, Northern district; E. H. O'Keefe, from general superintendent, MC, to assistant general manager; Bernard G. Smith, from trainmaster at Jackson, to northern district safety supervisor at Detroit. **AT MINNEAPOLIS**—J. R. Teasdale, appointed general agent. **AT ST. LOUIS**—T. R. Ruth, from general passenger agent to district passenger sales manager. **AT ALBANY**—C. H. LaFond, appointed division passenger sales manager. **AT BUFFALO**—C. A. Riebling, from general baggage agent, to manager baggage service. **AT NEW YORK**—E. R. Ahlborn, appointed assistant division passenger sales manager; F. H. Baird, from assistant vice-president, passenger traffic (abolished) to assistant vice-president, passenger sales and service; A. E. Baylis, from vice-president, freight traffic, to vice-president, freight sales and service; Mrs. Ioan V. Beckham, from assistant to assistant vice-president, passenger traffic (abolished) to director women's travel service; Edward H. Blewer, appointed assistant director of safety; Arthur J. Crookshank, from assistant general freight traffic manager (abolished) to director of rates (newly created post); George Coates, from general freight claim agent, to freight claim agent; J. C Connors, from assistant to assistant vice-president, passenger traffic, to administrative assistant, passenger sales; Charles M. Dabney, appointed safety engineer; J. F. Flynn, from assistant to general superintendent, property protection and freight claims, to administrative assistant; J. W. Higgins, from assistant general passenger agent to district passenger sales manager; Fred Hotchkiss, appointed safety supervisor; Louis J. Hutchings, appointed assistant general supervisor claim prevention; Elwood L. Hyatt, appointed safety engineer; J. B. Jerome, from foreign freight traffic manager (abolished) to newly created post of director of foreign freight sales; W. J. Leonard, from manager passenger station services, to director passenger station services; J. Edgar McDonald, from commerce attorney to assistant general solicitor; Ralph Y. Metcalf, appointed district safety supervisor, southern district; A. A. Meyer, from general passenger agent (rates and divisions), to director passenger fares and divisions; Roy L. Milbourne, from assistant to general freight traffic manager (abolished) to newly created post of executive assistant to vice-president freight sales and service; D. E. Mumford, from manager safety to director of safety; E. C. Nickerson, from vice-president, passenger services to vice-president, passenger sales and service; Fred N. Nye, from director transportation research to director of transportation and economic research; E. G. Overmire, from general supervisor loss and damage prevention to superintendent claim prevention; E. E. Pierce, general passenger agent, retired; M. Howard Rotchford, from assistant to vice-president of passenger services to executive assistant to vice-president passenger sales and services; Fred T. Schoedel, appointed district safety supervisor, western district; E. Alfred Seibel, appointed supervisor claim prevention; Edward G. Senger, appointed general supervisor claim prevention; R. R. Spangenberg, from general passenger agent at Cincinnati (abolished) to passenger sales manager; H. D. Vail, from freight traffic manager (abolished) to assistant vice-president, freight sales and service; Rupert T. Waite, from chief of tariff bureau (abolished) to newly created

post of manager of tariff bureau; W. H. White, from general passenger agent, suburban, to suburban passenger sales manager; Harvey L. Willard, from general coal traffic manager (abolished) to director of coal sales. **AT ROCHESTER, N.Y.**—Edward J. Leenhouts, from manager stockyards and agricultural development to director of agricultural sales. **AT CINCINNATI**—J. R. Barker, appointed division passenger sales manager; B. C. Giblon, appointed assistant division passenger sales manager; John H. Norwood, from freight traffic manager to assistant vice-president, freight sales and service. **AT PITTSBURGH**—J. G. Ronald, from assistant general passenger agent, P&LE, to assistant division passenger sales manager, NYC. **AT CLEVELAND**—H. H. Harwood from general passenger agent to passenger sales manager; Carl W. Sunderbrink, from freight traffic manager (abolished) to assistant vice-president, freight sales and service. J. Dring, from assistant division superintendent, Big Four, at East St. Louis, Ill., to superintendent at Springfield, Ohio. J. C. Kenefick, division superintendent at Chicago, transferred to Toledo, to succeed William A. Shea, on temporary leave of absence.

PITTSBURGH & LAKE ERIE—H. A. Brown, from general freight agent to assistant freight sales manager; R. E. Rogers, from coal traffic manager to coal sales manager; F. P. Sanford, from division freight agent at Youngstown, Ohio, to division freight sales manager; E. N. Smith from NYC freight agent at Pittsburgh to division freight sales manager there; J. J. Snyder, from assistant freight traffic manager to assistant freight sales manager; Frank P. Soen, appointed to newly created post of freight sales manager.

RUTLAND.—The freight traffic department has been reorganized and divided into four regions and the regional sales manager will be fully responsibile for sales efforts within his area. **Ralph L. Andreas,** vice-president—traffic; **Stephen A. Clifford,** general sales representative; **John E. Laughlin,** sales manager—rates; and **Frederick A. Martel,** assistant sales manager—rates, will be in Rutland. **CENTRAL REGION,** Rutland, Vt.—**John A. Halpin,** sales manager; **Herman E. Buchheim,** assistant sales manager; **John H. Mullen,** district sales representative; **Raymond W. Carroll,** manager milk sales. The Detroit, Mich., office with **Arthur A. Lindsay,** district sales representative, is included in the Central region. **NORTHEASTERN REGION,** 150 Causeway Street, Boston, Mass.—**John E. McGarrity,** sales manager; **Albert L. Taylor, John A. Clark and Charles J. Eagan,** district sales representatives. **WESTERN REGION,** 327 South LaSalle building, Chicago—**Oliver L. Crawford,** assistant vice-president; **Ray I. Nova** and **Robert W. Janz,** district sales representatives. The Cincinnati office at 205 East 60th Street, in charge of **John D. Lewis,** district sales representative, is part of the Western region. **EASTERN REGION,** 500 Fifth Avenue, New York—**Richard O. Fawcette,** sales manager; **Walter H. Lodge,** special sales representative; **James F. Phalen,** district sales representative.

SPRINGFIELD TERMINAL.—**Dwight A. Smith, Jr.,** has been appointed general manager at Springfield, Vt. **T. A. Cahee,** superintendent, retired January 15.

WESTERN MARYLAND.—**William T. McLendon** has been appointed district traffic manager at Atlanta, Ga. **W. Cecil Sinners** has been named assistant general freight agent at Baltimore.

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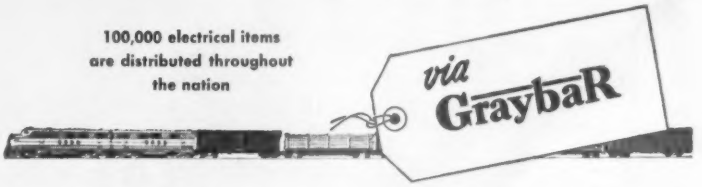

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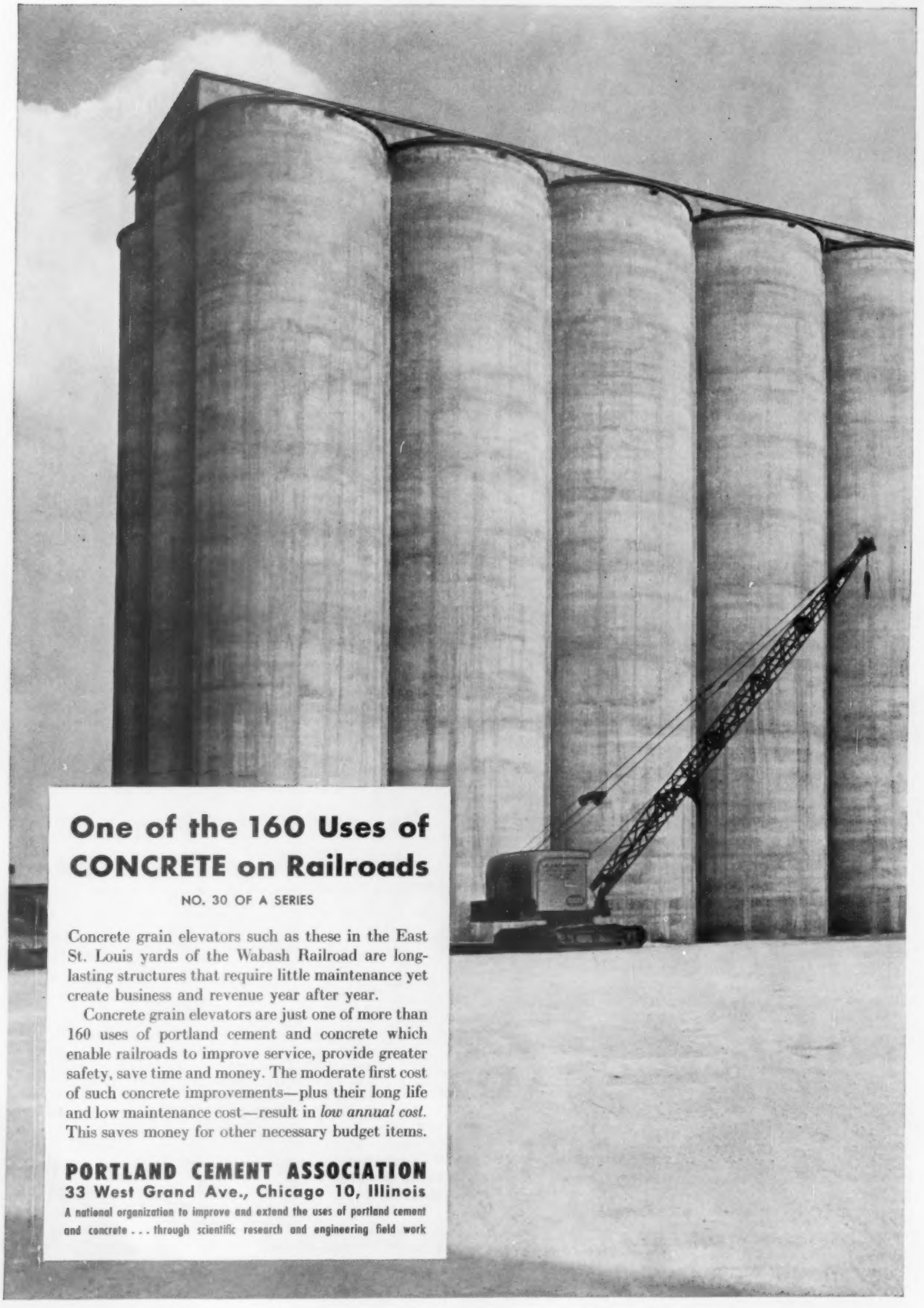

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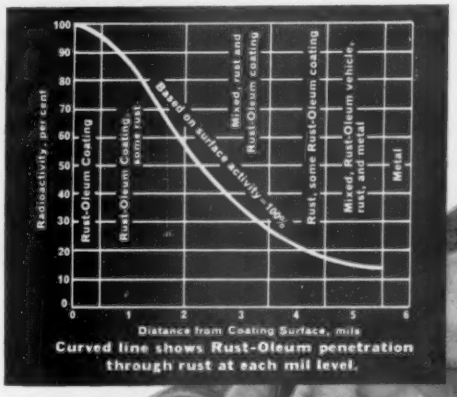
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Rust, some Rust-Oleum coating
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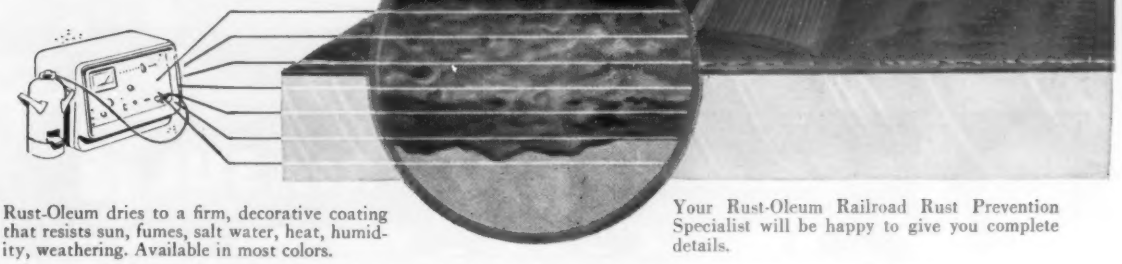
Curved line shows Rust-Oleum penetration through rust at each mil level.

Accept no substitutes. Buy—and specify only Rust-Oleum. You'll be happy that you did.



Rust-Oleum dries to a firm, decorative coating that resists sun, fumes, salt water, heat, humidity, weathering. Available in most colors.

Your Rust-Oleum Railroad Rust Prevention Specialist will be happy to give you complete details.

Rust-Oleum is available in practically all colors, including aluminum and white

...outlasts ALL other insulating materials!

The installation of Streamlite HAIRINSUL into new refrigerator cars is a one-time investment, because it outlasts the life of the car, and can be used again and again.

The successful use of all-hair HAIRINSUL in refrigerator cars for half a century is the best testimony that service conditions never impair its high insulating efficiency.

Some of the major reasons why Streamlite HAIRINSUL is specified by leading refrigerator car lines are given at the right. Write for complete data.

AMERICAN HAIR & FELT COMPANY
Merchandise Mart • Chicago, Illinois

- **LOW CONDUCTIVITY** — Thoroughly washed and sterilized, all-hair heat barrier. Rated conductivity — .25 btu per square foot, per hour, per degree F., per inch thick.
- **LIGHT WEIGHT** — Advanced processing methods reduce weight of STREAMLITE HAIRINSUL by 40%.
- **PERMANENT** — Does not disintegrate when wet, resists absorption. Will not shake down, is fire resistant and odorless.
- **EASY TO INSTALL** — Blankets may be applied to car wall in one piece, from sill to plate and from one side door to the other. Self-supporting in wall section between fasteners.
- **COMPLETE RANGE** — STREAMLITE HAIRINSUL is available ½" to 4" thick, up to 127" wide. Stitched on 5" or 10" centers between two layers of reinforced asphalt laminated paper. Other weights and facings are available.
- **HIGH SALVAGE VALUE** — The all-hair content does not deteriorate with age; therefore has high salvage value. No other type of insulation offers a comparable saving.

SETS THE STANDARD BY WHICH ALL OTHER REFRIGERATOR CAR INSULATIONS ARE JUDGED

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Makers of: Univac I • Univac II • Univac Scientific • Univac File-Computer • Univac 120 • Univac 60 • Univac High-Speed Printer

Handy Reference to Railroad Associations

The following list gives names and addresses of secretaries and dates and places of next or regular meeting.

AIR BRAKE ASSOCIATION.—Lawrence Wilcox, Room 827, 80 E. Jackson Blvd., Chicago 4. Annual meeting, September 10-12, Hotel Sherman, Chicago.

ALLIED RAILWAY SUPPLY ASSOCIATION.—C. F. Weil, P. O. Box 5522, Chicago 80.

AMERICAN ASSOCIATION OF BAGGAGE TRAFFIC MANAGERS.—T. R. Stanton, 1450 Railway Exchange Bldg., St. Louis 1. Annual meeting, June 20-22, Hotel Utah, Salt Lake City.

AMERICAN ASSOCIATION OF PASSENGER RATE MEN.—R. H. Chermak, 702 Union Station, Chicago.

AMERICAN ASSOCIATION OF PASSENGER TRAFFIC OFFICERS.—B. D. Branch, Eastern Time Table Distributing Company, Liberty Street Terminal, New York 6.

AMERICAN ASSOCIATION OF RAILROAD SUPERINTENDENTS.—Miss Elise La Chance, Room 901, 431 S. Dearborn St., Chicago 5. Annual meeting, June 5-7, LaSalle Hotel, Chicago.

AMERICAN ASSOCIATION OF TRAVELING PASSENGER AGENTS.—C. A. Melin, P. O. Box 5025, Cleveland 1.

AMERICAN COUNCIL OF RAILROAD WOMEN.—Mrs. Jane Beebe, New York, New Haven & Hartford, Boston 27. Spring meeting, March 17, Mayflower Hotel, Washington, D. C.

AMERICAN INSTITUTE OF ELECTRICAL ENGINEERS.—N. S. Hibshman, 33 W. 39th st., New York 18. Committee on Land Transportation.—P. G. Lessmann, Westinghouse Electric Corp., East Pittsburgh.

AMERICAN RAILWAY BRIDGE AND BUILDING ASSOCIATION.—Miss Elise La Chance, Room 901, 431 S. Dearborn St., Chicago 5. Annual Meeting, September 18-20, Conrad Hilton Hotel, Chicago.

AMERICAN RAILWAY CAR INSTITUTE.—W. A. Renz, 19 E. 47th St., New York 17.

AMERICAN RAILWAY DEVELOPMENT ASSOCIATION.—F. E. Wolff, Canadian Pacific, Toronto 1, Ont. Annual meeting, April 22-25, Peabody Hotel, Memphis.

AMERICAN RAILWAY ENGINEERING ASSOCIATION.—Works in cooperation with the Association of American Railroads, Engineering Division—Neal D. Howard, 59 E. Van Buren St., Chicago 5. Annual meeting, March 13-15, Palmer House, Chicago.

AMERICAN RAILWAY MAGAZINE EDITORS ASSOCIATION.—C. P. McCallum, New York, New Haven & Hartford, Room 2050, Grand Central Terminal, New York 17.

AMERICAN SHORT LINE RAILROAD ASSOCIATION.—C. E. Huntley, 2000 Massachusetts Ave., N.W., Washington 6, D. C.

AMERICAN SOCIETY FOR TESTING MATERIALS.—R. J. Painter, 1916 Race St., Philadelphia 3. Annual meeting and exhibit, June 17-22, Chalfonte-Haddon Hall, Atlantic City. Pacific Area meeting and exhibit, September 16-22, Hotel Statler, Los Angeles.

AMERICAN SOCIETY OF MECHANICAL ENGINEERS.—C. E. Davies, 29 W. 39th St., New York 18.

RAILROAD DIVISION.—R. L. Wilson, American Brake Shoe Company,, Mahwah, N. J.

AMERICAN WOOD-PRESERVER'S ASSOCIATION.—W. A. Penrose, 839 Seventeenth St., N.W., Washington 6, D. C. Annual meeting, April 23-25, Jung Hotel, New Orleans.

ASSOCIATED TRAFFIC CLUBS OF AMERICA.—R. P. DeGroote, Luckenbach Steamship Co., Inc., 110 S. Dearborn St., Room 1107, Chicago 3.—Annual meeting, October 24-25, Hotel Seville Miami Beach, Fla.

ASSOCIATION OF AMERICAN RAILROAD DINING CAR OFFICERS.—P. E. Griffith, 2028 Clark Ave., St. Louis 3.

ASSOCIATION OF AMERICAN RAILROADS.—George M. Campbell, Transportation Bldg., Washington 6, D. C.

Operations and Maintenance Department.—R. G. May, Vice-president, Transportation Bldg., Washington 6, D. C.

Operating-Transportation Division.—A. I. Ciliske 59 E. Van Buren St., Chicago 5.

Transportation Section.—H. A. Eaton, 59 E. Van Buren St., Chicago 5.

Operating Section.—H. S. Dewhurst, 59 E. Van Buren St, Chicago 5.

Communications Section.—A. H. Grothmann, 59 E. Van Buren St., Chicago 5. Annual Meeting, May 22-24, Netherlands Plaza Hotel, Cincinnati.

Fire Protection and Insurance Section.—W. E. Todd, 59 E. Van Buren St., Chicago 5. Annual meeting, October 22-24, Hotel Statler, Detroit.

Freight Loss and Damage Prevention Section.—G. H. Ruhle, 59 E. Van Buren St., Chicago 5. Annual meeting, May 2, St. Charles Hotel, New Orleans.

Freight Station Section.—W. E. Todd, 59 E. Van Buren St., Chicago 5. Annual meeting, April 24-26, Statler Hotel, Cleveland.

Medical and Surgical Section.—H. S. Dewhurst, 59 E. Van Buren St., Chicago 5. Annual meeting, March 19-20, Mark Hopkins Hotel, San Francisco.

Protective Section.—H. S. Dewhurst, 59 E. Van Buren St., Chicago 5. Annual meeting, May 15-17, Hotel Statler, St. Louis.

Safety Section.—H. S. Dewhurst, 59 E. Van Buren St., Chicago 5. Annual meeting, June 19-21, Brown Hotel, Louisville

Electrical Section of the Engineering and Mechanical Divisions.—S. W. Marras, 59 E. Van Buren St., Chicago 5. Annual meeting, June 26-28, Hotel Sherman, Chicago.

Engineering Division.—E. G. Gehrke, 59 E. Van Buren St., Chicago 5.

Construction and Maintenance Section.—Neal D. Howard, 59 E. Van Buren St., Chicago 5. Annual meeting, March 13-15, Palmer House, Chicago.

Signal Section.—R. H. C. Balliet, 59 E. Van Buren St., Chicago 5. Annual meeting, September 20-22, Conrad Hilton Hotel, Chicago.

Mechanical Division.—Fred Peronto, 59 E. Van Buren St., Chicago 5. Annual meeting, June 26-28, Hotel Sherman, Chicago.

Purchases and Stores Division.—John L. Timanus, Transportation Bldg., Washington 6, D. C. Annual meeting, May 16-18, Jefferson Hotel, St. Louis.

Freight Claim Division.—R. E. O'Donnell, 59 E. Van Buren St., Chicago 5. Annual meeting, May 1 and 3, St. Charles Hotel, New Orleans.

General Claims Division.—Bruce H. Smith, 59 E. Van Buren St., Chicago 5. Annual meeting, April 17-20, Shamrock Hotel, Houston.

Car Service Division.—Arthur H. Gass, Chairman, Transportation Bldg., Washington 6, D. C.

Finance, Accounting, Taxation and Valuation Department.—Arthur R. Seder, Vice-president, Transportation Bldg., Washington 6, D. C.

Accounting Division.—R. E. Keefer, Transportation Bldg., Washington 6, D. C. Annual meeting, May 28-31, Statler-Hilton Hotel, Los Angeles.

Treasury Division.—R. E. Keefer, Transportation Bldg., Washington 6, D. C. Annual meeting, September 17-20, Chateau Frontenac, Quebec.

ASSOCIATION OF INTERSTATE COMMERCE COMMISSION PRACTITIONERS.—Miss Sarah F. McDonough Executive Secretary, 2218 ICC Building, Washington 25, D. C.

ASSOCIATION OF RAILROAD ADVERTISING MANAGERS.—A. W. Eckstein, Illinois Central, 135 E. Eleventh Pl., Chicago 5.

BRIDGE AND BUILDING SUPPLY ASSOCIATION.—L. R. Gurley, Modern Railroads, 201 N. Wells St., Chicago 6. Exhibit in conjunction with meeting of American Railway Bridge & Building Association, September 17-20, The Coliseum, Chicago.

CANADIAN RAILWAY CLUB.—G. R. Fitt, Canadian Pacific Railway, Windsor Station, Montreal 3, Quebec. Regular meetings, second Monday of each month, except June, July and August. Sheraton-Mount Royal Hotel Montreal, Que.

CAR DEPARTMENT ASSOCIATION OF ST. LOUIS.—E. S. Walsh, 2606 Scott Ave., St. Louis 3. Regular meetings third Tuesday of each month except June, July, August and December, Hotel DeSoto.

CAR DEPARTMENT OFFICERS' ASSOCIATION.—F. H. Stremmel, 6536 N. Oxford Ave., Chicago 31. Annual meeting, September 10-12, Hotel Sherman, Chicago.

CAR FOREMEN'S ASSOCIATION OF CHICAGO.—R. C. Berglund, 8215 Drexel Ave., Chicago 19. Regular meetings, second Monday of each month except June, July and August, LaSalle Hotel.

CAR FOREMEN'S ASSOCIATION OF OMAHA, COUNCIL BLUFFS AND SOUTH OMAHA INTERCHANGE.—C. G. Poetzel, Chicago & North Western, 11th St. and Avenue J., Council Bluffs, Ia. Regular meetings, second Tuesday of each month, except July and August. Chieftain Hotel, Council Bluffs.

CENTRAL RAILWAY CLUB OF BUFFALO.—J. A. Gorman, 1817 Hotel Statler, Buffalo 5. Regular meetings, second Thursday of each month except June, July and August, Hotel Statler.

CHICAGO RAILROAD DIESEL CLUB.—E. C. Fosdick, 4226 W. Washington Blvd., Chicago 24. Regular meetings first Thursday after first Sunday of each month except July and August, Hotel Sherman, 7:30 p.m.

CHICAGO RAILROADS CAR ACCOUNTING OFFICERS.—Max Jauch (chairman) Chicago & North Western, 4809 N. Ravenswood Ave., Chicago 40. Regular meetings last Wednesday of each month, except July and August, Midland Hotel, at 12:15 p.m.

EASTERN ASSOCIATION OF CAR SERVICE OFFICERS.—H. C. Rochester, Canadian National, 891 Notre Dame St., West, Montreal 3. Next meeting, May 3-4, Hotel Statler, St. Louis.

EASTERN CAR FOREMAN'S ASSOCIATION.—W. P. Dizard, 30 Church St., New York 7. Regular meetings, second Friday of January, February, March, April, May, October and November, 29 W. 39th St., New York.

LOCOMOTIVE MAINTENANCE OFFICERS' ASSOCIATION.—C. M. Lipscomb, 1721 Parker St., North Little Rock, Ark. Annual meeting September 10-12, Hotel Sherman, Chicago.

MAINTENANCE OF WAY CLUB OF CHICAGO.—S. Kosco, 135 E. Eleventh Place, Chicago 5. Regular meetings, October through April, Hamilton Hotel, Chicago.

METROPOLITAN MAINTENANCE OF WAY CLUB.—John S. Vreeland, Simmons-Boardman Publishing Corp., 30 Church St., New York 7. Meets in February, April, October and December, Railroad Machinery Club, 30 Church St., New York.

MILITARY RAILWAY SERVICE VETERANS.—F. W. Okie, Union R.R., Frick Bldg., P. O. Box 536, Pittsburgh.

MISSISSIPPI VALLEY MAINTENANCE OF WAY CLUB.—P. E. Odom, 1025 Frisco Building, 906 Olive St., St. Louis. Regular meetings second Monday of each month September through May, DeSoto Hotel, St. Louis.

NATIONAL ASSOCIATION OF RAILROAD AND UTILITIES COMMISSIONERS.—R. Everette Kreeger, 7413 New Post Office Bldg., P. O. Box 684, Washington 4, D. C.

NATIONAL ASSOCIATION OF SHIPPERS' ADVISORY BOARDS.—F. Easterling, Brown Paper Company, West Monroe, La. Annual meeting, October 16-18, Ambassador Hotel, Los Angeles.

NATIONAL DEFENSE TRANSPORTATION ASSOCIATION.—Mrs. Lois C. Gebran, Suite 728, 1001 Connecticut Ave., Washington 6, D. C.

NATIONAL INDUSTRIAL TRAFFIC LEAGUE.—L. J. Dorr, Suite 909, Sheraton Bldg., 711 14th St., Washington 5, D. C. Annual meeting, November 15-16, Commodore Hotel, New York.

NATIONAL RAILWAY APPLIANCES ASSOCIATION.—Kenneth Cavins, Fairmont Railway Motors, Inc., 310 S. Michigan Ave., Chicago 4. Lewis Thomas, Asst. Secy., 59 E. Van Burean St., Chicago 5.

NATIONAL SAFETY COUNCIL RAILROAD SECTION.—J. H. Williams, Texas & Pacific, Texas & Pacific Bldg., Dallas 2.

NEW ENGLAND RAILROAD CLUB.—William M. McCombs, 35 Lewis Wharf, Boston 10. Regular meeting, second Tuesday of each month., except May-September, incl. Hotel Vendome, Boston.

NEW YORK RAILROAD CLUB.—John Burry, 30 Church St., New York 7. Regular meetings, third Thursday of each month except June, July, August, September and December. Century Room, Commodore Hotel. Reception, 6 p.m.; dinner, 7; meeting, 8:15.

NORTHWEST CARMEN'S ASSOCIATION.—N. J. Maglich, Minnesota Transfer Ry., 2071 University Ave., St. Paul 4, Minn. Regular meetings, first Monday of each month, except June, July, and August, Midway Club, 1931 University Ave., St. Paul.

NORTHWEST LOCOMOTIVE ASSOCIATION.—W. N. Cox, Northern Pacific, St. Paul 1, Minn. Regular meetings, fourth Tuesday of January, May and September, Hotel St. Paul, St. Paul; fourth Tuesday of March, June and November, Hotel Nicollet, Minneapolis.

NORTHWEST MAINTENANCE OF WAY CLUB.—L. C. Blanchard, Milwaukee Passenger Depot, Minneapolis 1. Regular meetings, fourth Thursday of each month, September through April, inclusive, excepting November and December which are third Thursday, Midway Club, 1931 University Ave., St. Paul.

PACIFIC RAILWAY CLUB.—S. E. Byler, 121 E. Sixth St., Los Angeles 14. Regular meetings, seconind Thursday of each alternate month at Palace Hotel, San Francisco, and Elks' Temple, Los Angeles.

RAILROAD PUBLIC RELATIONS ASSOCIATION.—J. Don Parel, Association of American Railroads, Transportation Bldg., Washington 6. D. C.

RAILWAY CLUB OF PITTSBURGH.—G. E. Morrison, 2710 Koppers Bldg., Pittsburgh 19. Regular meetings third Thursday of each month, except June-September, incl. and December, Hotel Sherwyn. Dinner, 6:30 p.m.; meeting, 8.

RAILWAY ELECTRIC SUPPLY MANUFACTURERS' ASSOCIATION.—L. R. Oswald, Thos. A. Edison, Inc., 1500 S. Western Ave., Chicago 8.

RAILWAY FUEL AND TRAVELING ENGINEERS' ASSOCIATION.—L. H. Peters, New York Central, Room 1213, 139 W. Van Buren St., Chicago 5. Annual meeting, September 10-12, Hotel Sherman, Chicago.

RAILWAY PROGRESS INSTITUTE.—T. A. Nooner, Jr., First National Bank Bldg., Chicago.

RAILWAY SUPPLY MANUFACTURERS' ASSOCIATION.—A. W. Brown, 527 Lexington Ave., New York 17.

RAILWAY SYSTEMS AND PROCEDURES ASSOCIATION.—J. W. Milliken, *Railway Age*, 30 Church St., New York 7. Annual meeting April 17-19. Hotel Morrison, Chicago.

RAILWAY TELEGRAPH AND TELEPHONE APPLIANCE ASSOCIATION.—G. A. Nelson, Waterbury Battery Company, 30 Church St., New York 7.

RAILWAY TIE ASSOCIATION.—Roy M. Edmonds, 1221 Locust St., St. Louis 3. Annual meeting, October 24-26, Hotel Roanoke, Roanoke, Va.

ROADMASTERS AND MAINTENANCE OF WAY ASSOCIATION.—Miss Elise La Chance, Room 901, 431 S. Dearborn St., Chicago 5. Annual meeting, September 18-20, Conrad Hilton Hotel, Chicago.

ST. LOUIS RAILROAD DIESEL CLUB.—F. C. Whitlock, Terminal Railroad Association of St. Louis, 376 Union Station, St. Louis 3. Regular meetings second Tuesday of each month, Hotel York. Dinner, 6:45 p.m.; meeting, 8.

SIGNAL APPLIANCE ASSOCIATION.—G. A. Nelson, Waterbury Battery Company, 30 Church St., New York 7. Meets with AAR Signal Section.

SOUTHEASTERN RAILWAY DIESEL CLUB.—H. W. Brewer, Seaboard Air Line, P. O. Box 1654, Norfolk, Va. Regular meetings, second Tuesday in February, April, June, August, October and December, 9:30 a.m., Mayflower Hotel, Jacksonville.

SOUTHERN AND SOUTHWESTERN RAILWAY CLUB.—A. T. Miller, 4 Hunter St., S. E. Atlanta. Regular meetings, third Thursday in January, March, May, and November at Atlanta.

SOUTHERN ASSOCIATION OF CAR SERVICE OFFICERS.—F. I. Umhau, Southern Ry., Atlanta 3.

TORONTO RAILWAY CLUB.—H. W. Somerville, P. O. Box 8, Terminal "A," Toronto 1, Ont. Regular meetings, fourth Monday of each month except February, June, July, August and December, Royal York Hotel.

TRACK SUPPLY ASSOCIATION.—Lewis Thomas, Q and C Company, 59 E. Van Buren St., Chicago 5. Exhibit in conjunction with meeting of Roadmasters & Maintenance of Way Association, September 17-20, The Coliseum, Chicago.

WESTERN ASSOCIATION OF RAILWAY TAX COMMISSIONERS.—L. R. Norberg, 516 W. Jackson Blvd., Chicago 6. Regular meetings, 12:15 p.m., first Wednesday of each month, except July and August, Traffic Club, Palmer House, Chicago.

WESTERN RAILWAY CLUB.—E. E. Thulin, Suite 339, Hotel Sherman, Chicago 1. Meetings at Hotel Sherman, March 19, April 16, May 21.

The Engineer's Field Report

CASE HISTORY

PRODUCT Chevron Starting Fluid

FIRM Great Northern Railway Havre, Montana

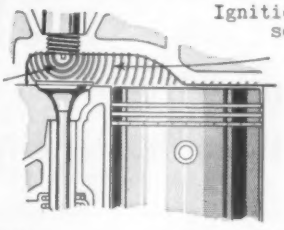
Special fluid starts 250-ton crane instantly, saves time in emergencies—even at 50° below

GREAT NORTHERN RAILWAY'S 250-TON, RAILROAD CRANE (above) starts instantly with Chevron Starting Fluid in temperatures ranging to 50° below zero—even after standing idle for months at a time. Former steam-powered wrecker equipment took crew 12 hours to start. This crane with its two 174 h.p. Cummins diesel engines is now available for derailment emergencies on short notice.

"Slow-grind starts on battery power alone waste too much valuable time. Chevron Starting Fluid fires these engines 'right now'—in any weather." A Great Northern engineer shows how simple it is to insert 7CC gelatin capsule of Chevron Starting Fluid in unit's air-intake system. Fluid is also available in 17CC capsules and 1-pint cans.

Why Chevron Starting Fluid starts engines instantly

Highly volatile: 7 times more than gasoline



Ignition temperature several hundred degrees lower than diesel fuel

Contains wear-reducing lubricants

Additives inhibit ice formation

CHEVRON STARTING FLUID

FREE FOLDERS tell more about the Chevron Starting Fluid and Chevron Pressure Primer System. Write or ask for them.

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3. You can verify the news leadership . . . . . In 1955, more than 90% of the major articles in RAILWAY AGE were either "firsts" or "exclusives". . . one big reason it is the "Workbook of the Railways."

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RAILWAY AGE | Workbook of the Railways

This is the third in a series of advertisements about the people of Standard.

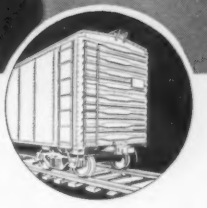
His hand is on the throttle . . . at Standard

This is R. Arthur Williams, Standard Railway president, a railroad equipment man all of his business life.

For many years he has served as an officer of the Transportation Association of America and on the Executive Committee of the Railway Progress Institute. As head of the Standard team, his railroad interests and services are broad.

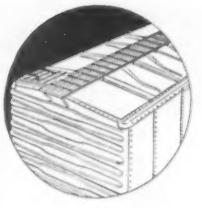
Art's specialty is obvious—he keeps this vast organization running smoothly—whose purpose and reputation is service to the carbuilders and railroads, keeping cars on the line, *producing*.

Whether your order is for one car or one hundred—for new car parts or for service on existing equipment—Art Williams and company at Standard Railway are "at your service".



Improved Dreadnaught End

Standard Railway components are *lighter* for equal strength, *stronger* for equal weight . . . *increased* car life . . . greater profitability.



Diagonal Panel Roof

Adds structural rigidity to the car. Costs less to buy and use. Makes money by keeping cars *on the line*.

Standard RAILWAY EQUIPMENT MANUFACTURING COMPANY

GENERAL OFFICE: 4527 Columbia Ave., Hammond, Ind. • New York • Chicago • St. Paul • San Francisco

Standard Railway Equipment Manufacturing Company, (Canada) Ltd., Sun Life Building, Montreal

Current Publications

BOOKS

RAILS AROUND GOLD HILL, by Morris Cafky. 463 pages, illustrations, maps. Rocky Mountain Railroad Club, Mr. Bryant McFadden, Book Treasurer, 2561 South Cook st., Denver 10. $10.

The Cripple Creek Gold Mining District of Colorado produced nearly half a billion dollars worth of gold, and brought into being three remarkable mountain railroads—the Florence & Cripple Creek, approaching from the south, the Colorado Springs & Cripple Creek District, from the east, and the Midland Terminal from the north. Gold Hill was a prominent landmark, rising to over 10,250 ft elevation, not far from the city of Cripple Creek. These railroads eventually laid a network of rails which completely surrounded Gold Hill and suggested the title of this book. This is the story of the three railroads—their corporate history, operating methods and problems, motive power and rolling stock, as well as colorful incidents which occurred on them. Included are locomotive and car rosters, equipment drawings and a display of annual passes.

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THE RAILROADS OF THE SOUTH, 1865-1900, A STUDY IN FINANCE AND CONTROL, by John F. Stover. 310 pages, maps. University of North Carolina Press, Chapel Hill, N.C. $5.

The thirty-five years that followed the Civil War were decisive ones in American railroad history. All the great railroad systems of the South today were created during that period of physical reconstruction in the South and alternate boom and panic in the national economy. In the struggle for power out of which emerged the modern railroad network, the southern railroads—originally locally owned and financed—came under the influence or control of northern financiers and institutions.

In the first eight post-war years, the scene was dominated by reconstruction of the war-torn southern lines from Virginia to Louisiana and by the pilfering and swindling activities of numerous carpetbaggers and native sons, ending in the panic of 1873. The rest of that decade saw two notable attempts by northern railroads to build southern empires—the Pennsylvania's unsuccessful construction of a 2,000-mile system, and the more enduring effort of the Illinois Central to carry its northern line to New Orleans, becoming the "Main Line of Mid-America." In the prosperous eighties, the Louisville & Nashville emerged, with northern backing, as the major system of the middle South. In the nineties, under the impact of the panic of 1893, Morgan men and money created the Southern out of the defunct Richmond & Danville. The end of the century found the railroads of the South consolidated and expanded, under the direction of northern men, money, and management.

Builders and manipulators march through the pages of this book. The personalities and exploits of many striking characters — ex-Confederate generals like Beauregard and Mahone, carpetbaggers like "subtle" McComb, builders like Smith of the L&N, and financial titans like Huntington and Flagler—enliven its pages as the story of railroad after railroad quietly moving toward northern financial domination develops.

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EXPERIENCE UNDER RAILWAY LABOR LEGISLATION, by Leonard A. Lecht. 254 pages. Columbia University Press, 2960 Broadway, New York 27. $4.25.

Postwar seizures of railroads by the Federal government focused public attention on the Railway Labor Act. This law is the most important element in the body of legislation regulating railway collective bargaining and providing social security and job protection separately from general labor laws. Forces affecting the development of railway labor legislation and the issues arising out of its application provide the subject for this study. Implicit in the survey are a number of important questions concerning industry-wide bargaining, government's role in collective bargaining, and protection of the public interest in industries characterized by organized power blocs representing both sides of the labor market. While the answers to these questions lie largely outside the scope of this study, they are presented to the reader as significant issues for further research and evaluation. The author suggests changes in the Railway Labor Act which he believes would break up the chain of strike votes, emergency boards, and injunctions or seizures, by encouraging settlements in the early stages of collective bargaining. The study covers the beginnings of railway labor legislation; the Railroad Administration and the Railroad Labor Board; the Railway Labor Act and its amendments; collective bargaining under the act; federal full-crew, train-limit and six-hour-day legislation; consolidation and job protection; establishment of a separate railway social security system; labor relations during World War II; collective bargaining since World War II; and the diesel movement. The book concludes with a table of cases, a glossary of terms, and an extensive bibliography.

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APPRENTICESHIP—PAST AND PRESENT, prepared by Reginald Perry, Bureau of Apprenticeship, United States Department of Labor. Third edition, 34 pages, illustrations. Available from Government Printing Office, Washington 25, D.C. 20¢.

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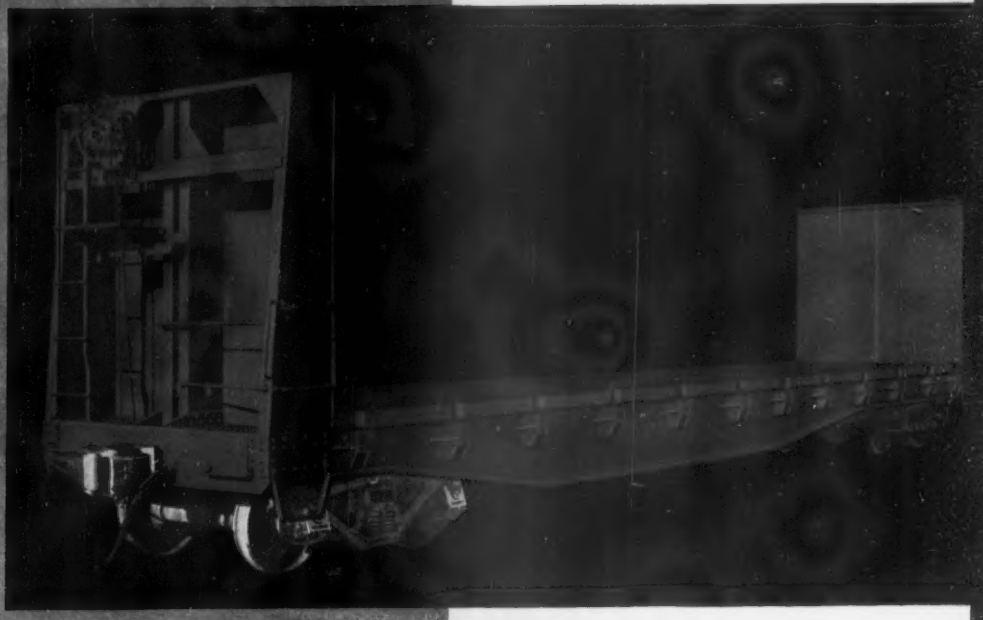

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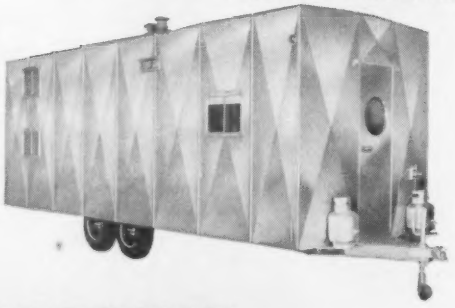

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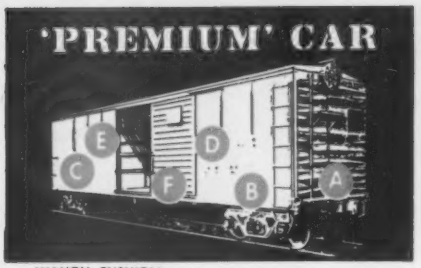

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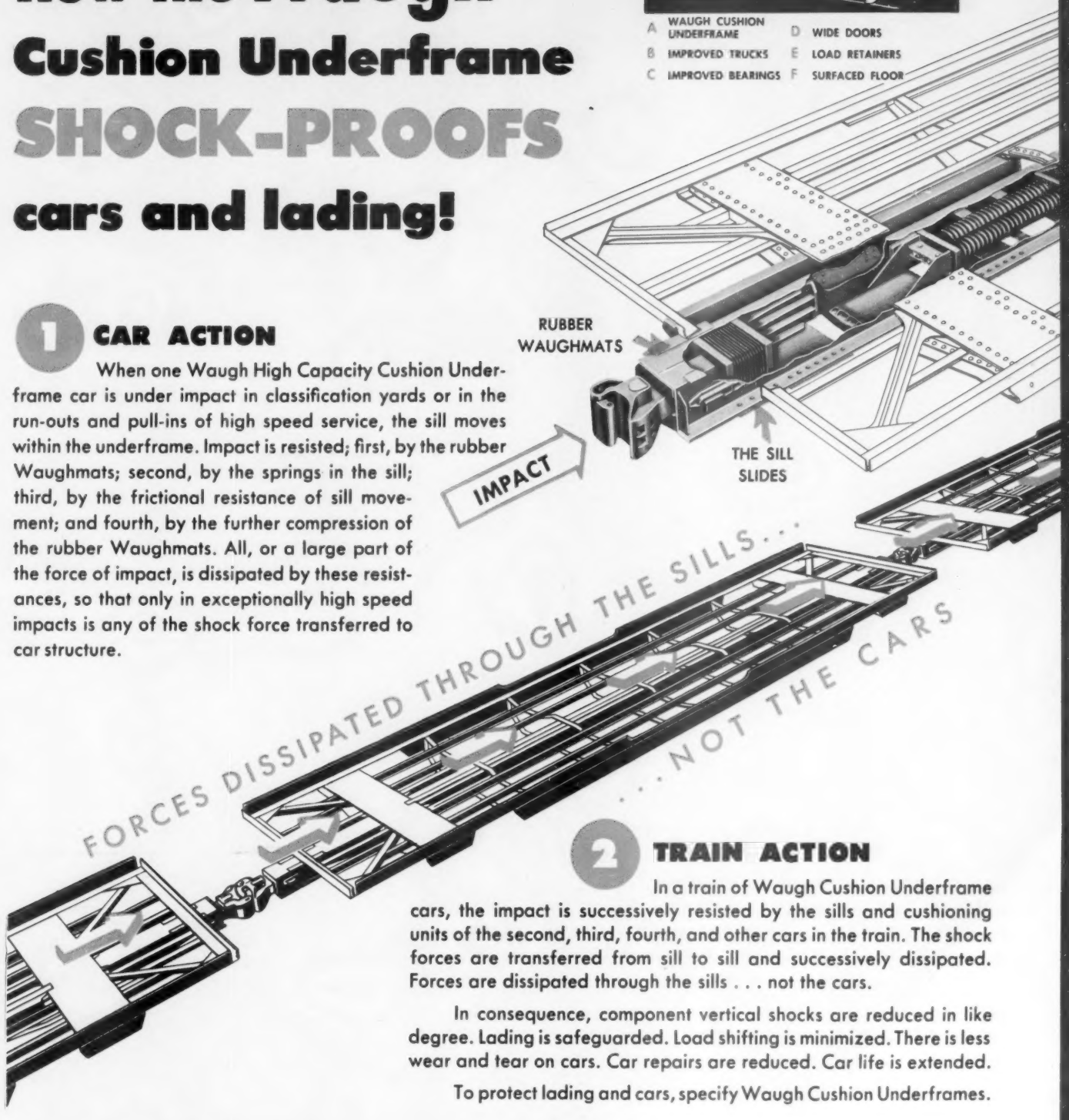

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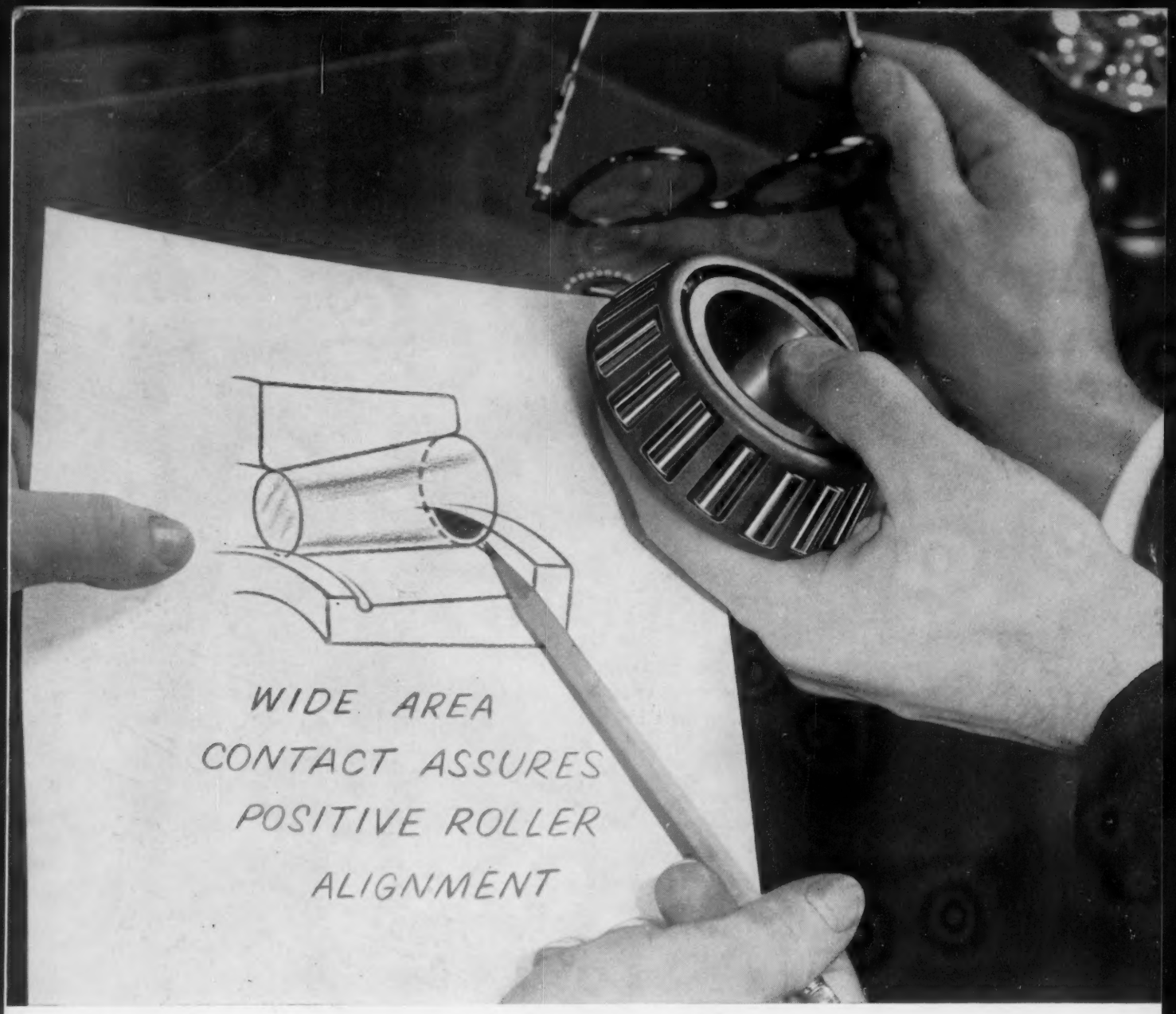

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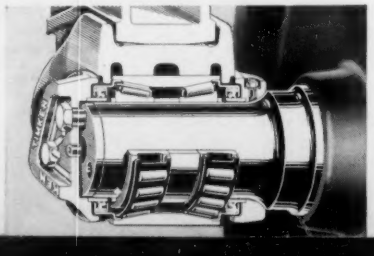

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